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McDOWELL TECHNICAL INSTITUTE

1970 —1971 ANNOUNCEMENTS

NORTH CAROLINA DEPARTMENT OF COMMUNITY COLLEGES

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GENERAL CATALOG

Volume 5 Announcements for 1970-1971 School Year

MARION, NORTH CAROLINA 28752

1970-1971 Academic Calendar

	1970	
FALL QUARTER	Registration and Orientation	September 8
	Day Classes Begin	September 9
	Last Day to Register of Change Schedule	September 18
	End of Fall Quarter	November 24
	Thanksgiving Holidays	November 25, 26, 27
WINTER QUARTER	Registration and Orientation	November 30
	Day Classes Begin	December 1
	Last Day to Register of Change Schedule	December 11
	1971	
	Christmas Holidays	Dec. 21 – Jan. 3
	Classes Resume	January 4
	End of Winter Quarter	March 1
SPRING QUARTER	Registration and Orientation	March 8
	Day Classes Begin	March 9
	Last Day to Register or Change Schedule	March 18
	Easter Holidays	April 9-12
	End of Spring Quarter	May 26
SUMMER QUARTER	Registration and Orientation	June 10
	Day Classes Begin	June 11
	Last Day to Register or Change Schedule	June 20
	Independence Day Holidays	July 5, 6
	End of Summer Quarter	August 26
	Graduation	August 27

1970	S	M	T	W	T	F	S	1971	S	M	T	W	T	F	S
JUL				1	2	3	4	JAN						1	2
	5	6	7	8	9	10	11		3	4	5	6	7	8	9
	12	13	14	15	16	17	18		10	11	12	13	14	15	16
	19	20	21	22	23	24	25		17	18	19	20	21	22	23
	26	27	28	29	30	31			24	25	26	27	28	29	30
AUG							1		31						
	2	3	4	5	6	7	8	FEB		1	2	3	4	5	6
	9	10	11	12	13	14	15		7	8	9	10	11	12	13
	16	17	18	19	20	21	22		14	15	16	17	18	19	20
	23	24	25	26	27	28	29		21	22	23	24	25	26	27
	30	31							28						
SEP			1	2	3	4	5	MAR		1	2	3	4	5	6
	6	7	8	9	10	11	12		7	8	9	10	11	12	13
	13	14	15	16	17	18	19		14	15	16	17	18	19	20
	20	21	22	23	24	25	26		21	22	23	24	25	26	27
	27	28	29	30					28	29	30	31			
OCT					1	2	3	APR					1	2	3
	4	5	6	7	8	9	10		4	5	6	7	8	9	10
	11	12	13	14	15	16	17		11	12	13	14	15	16	17
	18	19	20	21	22	23	24		18	19	20	21	22	23	24
	25	26	27	28	29	30	31		25	26	27	28	29	30	
								MAY							1
NOV	1	2	3	4	5	6	7		2	3	4	5	6	7	8
	8	9	10	11	12	13	14		9	10	11	12	13	14	15
	15	16	17	18	19	20	21		16	17	18	19	20	21	22
	22	23	24	25	26	27	28		23	24	25	26	27	28	29
	29	30							30	31					
DEC			1	2	3	4	5	JUN			1	2	3	4	5
	6	7	8	9	10	11	12		6	7	8	9	10	11	12
	13	14	15	16	17	18	19		13	14	15	16	17	18	19
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President's Message . . .

Good education must develop citizens who work as well as play; produce as well as consume; create as well as appreciate. Vocational and Technical education for youth and adults, is playing a mojor role in reaching these objectives. Preparation for work, through the Community Colleges and Technical Institutes, of North Carolina provide functional education for North Carolina citizens, developing occupational competency along with social and civic responsibilities.

The Community College system in North Carolina is functioning in two important ways to justify North Carolina's faith in education. It is making educational programs more attractive and meaningful for a larger number of youths. At the same time, areas of instruction develop the basic skills and technical knowledge necessary to increase the productive capacity of workers, upon which depends North Carolina's industrial growth and development.

John A. Price

John A. Price, *President*
McDowell Technical Institute

Administration and Faculty

THE BOARD OF TRUSTEES

Vernon T. Eckerd, *Chairman*
Charles A. Turner, *Vice-Chairman*
John A. Price, *Secretary*

Paul Brooks
Joe Tyler
Charles Allman

Paul Story
Gale Wade
James E. Johnson

ADMINISTRATIVE PERSONNEL

John A. Price	*President*
Jerry L. Van Dyke	*Director, Occupational Educational Programs*
Robert L. Smithers	*Director, Student Personnel Services*
Robert Knox	*Director of Extension*
Paul L. English	*Director of Adult Education*
James V. McMahan	*Learning Laboratory Coordinator*
Charles E. McKinney	*Librarian*
Mrs. Joyce B. Orndoff	*Learning Laboratory Coordinator and Assistant Librarian*
Mrs. Katherine Young	*Bookkeeper*
Mrs. Mildred Reese	*Secretary to the President*
Mrs. Dorothy Hunter	*Secretary*
Mrs. Ruth Hughes	*Secretary*

THE FACULTY

C. B. Branson
Mechanical Drafting

James R. Brown
Auto Mechanics

Larry W. Brown
Related Subjects Instructor

Ben Burrill
Electrical Installation
& Maintenance

Eldon M. Cooke
Business Administration

Janet G. Estes
Business

Pete Hamlin
Auto Body Repair

Neal Waters
Welding

Sandra J. Winkler
Business

General Information.......................

HISTORY OF McDOWELL TECHNICAL INSTITUTE

McDowell Technical Institute formerly known as the Marion-McDowell Industrial Education Center was established in May, 1964 as a satelite unit of the Asheville-Buncombe Technical Institute. The Institute operated until September, 1967, under the leadership of the Asheville Technical Institute and a local advisory committee. In 1967 the Institute became an independent unit of the Department of Community College System and more autonomy was given as a result of the appointment of an eight member Board of Trustees. Since its opening date, the institute has made continuous growth and many changes have taken place. With a beginning enrollment of 30 students in the day and evening programs, including the business secretarial curriculum, it has grown to an enrollment of 180 students in ten curriculum areas.

Through the Extension Division educational services have been rendered in the following areas:

1) New and expanding industrial training
2) Upgrading courses for those who are employed
3) Fire service training for volunteer fire departments
4) Supervisor development training for supervisors in industry
5) General Adult Education
6) Adult Basic Education

The educational service areas of the Institute include McDowell, Mitchell and Yancey counties. Since the Institute was established, it has reached more than 6,000 adults 18 years of age or older in the tri-county area.

In the summer of 1970 the Institute will occupy new classroom facilities on a permanent campus site of 31 acres.

PURPOSE

McDowell Technical Institute was established to serve the people and industry of this area by providing a comprehensive post-high school education program. Available are programs in college transfer, technical, business, vocational-trade, adult education, upgrading, cultural and avocational courses. In addition, guidance services are available for both in-school and out-of-school citizens.

The Institute seeks to develop the skills, knowledge, abilities, and attitudes of each student for entry and progress within an occupational field. For employed persons courses are designed to upgrade and increase their present skills and knowledge.

In addition, McDowell Tech provides an opportunity for all adults to further their basic elementary and high school education, to create and develop cultural and avocational interest, and to acquire knowledge and habits required for more effective citizenship and family living.

OBJECTIVES

1. To provide **Expanded Educational Opportunities** for young people and adults who would not otherwise continue their education.
2. To provide **Relatively Inexpensive Educational Opportunities** for High School graduates, school drop outs, and adults.
3. To provide **Technical Programs,** preparing students for jobs in industry, business, and service occupations.
4. To provide **Vocational Programs** of less than Technical level, preparing students for jobs requiring different levels of ability and skill.
5. To provide a **College Transfer Program**, consisting of the first two years of college studies.

6. To provide short courses in the interest of the general public and service needs of the community.

LIBRARY

The Library, which began operation in 1969, has acquired approximately 3,500 volumes as a basic collection to support existing programs of instruction. New books are being added continually and there are seventy-five periodicals available. The open-shelf system is used; students are encouraged to browse and use the facilities to study.

The Library supplements classroom instruction by making available a selection of audio-visual material and providing inter-library loan services.

CHANGES IN POLICIES AND REGULATIONS

McDowell Technical Institute reserves the right to make changes in the regulations, fees and other matters of policy and procedure as and when deemed necessary.

ADMINISTRATIVE OFFICE HOURS

The administrative offices of the Institute are open Monday through Thursday from 8:00 a.m. to 4:30 p.m. On Friday, the offices are open from 8:00 a.m. to 4:00 p.m.

LEARNING LABORATORY

The Learning Laboratory is one of the most versatile of all the learning concepts utilized by the Community College System. The Laboratory uses the Programmed Material approach and offers planned study in all of the areas served by the Institute. The programmed material is designed in such a manner as to aid the student in learning information in small sequences. Each sequence requires an immediate response, and each response is immediately checked. If the student fails to learn, or learns incorrectly, the program makes the correction or re-teaches. Probably the most significant factor for its tremendous success is that it allows the student to progress at his own rate without the necessity of being held back or keeping up with a class.

Because there are no classes in the Learning Laboratory, any person eighteen years of age or older can enroll immediately. Each student schedules his own work session with the Learning Lab Coodernator. The Coodernator has the responsibility of locating the level at which a student will undertake to achieve his desired goal. He administers tests to assure that the student is approaching his goal.

McDowell Technical Institute has been officially designated as a General Educational Development Testing Center. The G.E.D. Test is administered through the Learning Laboratory. The primary use of the G.E.D. examination is to appraise the educational development of adults who have not completed their formal high school education. Eligibility requirements to take the G.E.D. examination are as follows:

1. Eighteen years of age or older. The applicant must have been out of a regular high school program for at least six months.

2. The applicant is a resident of the State.

Anyone interested in taking this examination may contact the Learning Laboratory for additional information.

Admission Requirements: Any adult who had a desire to raise his or her educational level and who is able to benefit from this type of study.

Expenses or Fees: There is no charge for study in the Learning Laboratory.

Hours: 8:00 a.m. – 10:00 p.m. Monday – Thursday
8:00 a.m. – 4:00 p.m. Fridays

Programs of Study

COLLEGE TRANSFER DIVISION

McDowell Technical Institute offers a two-year college extension program through Appalachian State University. Students will be able to earn approximately 90 quarter hours of college credit through this extension program and will be eligible to enroll on the Appalachian State University campus to complete the third and fourth year requirements towards a baccalaureate degree.

TECHNICAL DIVISION

Courses offered in the technical division are designed to meet an increasing demand for high level industrial skills in North Carolina. Students entering the Technical Division are required to meet educational and aptitude standards appropriate to the course chosen. Such standards require a firm educational base and a level of maturity expected of adults.

Students who successfully complete courses in this division will be prepared to offer prospective employers the training, knowledge, and skill necessary to work as an Industrial Technician. More time will be required to attain such a degree of proficiency than would be necessary in the less exacting trade courses. Applicants for the technical division will therefore be urged to enroll for the full-time program.

VOCATIONAL DIVISION

Courses in the vocational division place emphasis on training in those manipulative and mental skills applicable to the particular curriculum in which the student is enrolled. Students work under close supervision to obtain skills on a level acceptable to industry.

EXTENSION DIVISION

Short term courses are provided for men and women who though employed, seek to upgrade, update, and generally enhance their individual knowledge and performance. Also available are supervisory-level courses designed to stimulate those individuals who aspire to advance their knowledge in the fields of management, and firemanship training for volunteer-firemen concerned with improving their skill.

Training for new and expanding industry constitutes an important segment of the extension division. In cooperation with the industry involved, workers may be trained for specific occupational areas.

GENERAL ADULT EDUCATION

To meet the challenge of the space age, the adult education curriculum provides studies in subjects as current as the morning headlines and as old as organized knowledge. Any adult, 18 years of age or older, is eligible to enroll in this area. Today's program stresses training or retraining for jobs or upgrading in business or industry, homemaking and parent education, areas of instruction of special community interest, and a high school certificate program for those adults who with to attain a high school equivalent certificate.

EVENING PROGRAMS

In addition to the full-time programs offered during the day, some of the same curriculum courses are taught during the evening. **Placement Testing is required for anyone pursuing a curriculum course for credit.**

The Extension Division offers courses in the interest and for self improvement by the general public. Adults pursuing these non-credit courses are not subject to Placement Testing.

Admissions Information. . . . .

ADMISSIONS REQUIREMENTS

McDowell Technical Institute operates under an "Open Door" admissions policy. Any high school graduate or individuals 18 years of age or older, whether they are high school graduates or not, who apply for admission to the institute, will be accepted providing that they meet the specified requirements in the division that they desire to enter.

The admission procedure requires with the exception of the Adult Education and College Transfer programs, that all students submit the following forms:

1. A completed application for admission. A deposit of $5.00 must accompany each application. The deposit is not refundable but will be applied towards the tuition fee for the first quarter.
2. Transcript of secondary school education. Transfer students will also be required to submit a transcript(s) of all previous academic work.
3. Verification of a physical examination.
4. Completion of the Placement Test Battery.
5. Interview with Student Personnel staff to review test scores. Program selections are either confirmed or rejected and course recommendations are made.

Students are cautioned that unless all applicable supporting documents for admission are acknowledged by the Student Personnel Office prior to their initial registration, permission to register for classes will be denied. In case of extenuating circumstances a **conditional** admission to the Institute may be granted.

The Institute will mail notifications of acceptance to students who have fulfilled all requirements for admission.

Divisional Requirements Are As Follows:

COLLEGE TRANSFER DIVISION

PROSPECTIVE STUDENTS ARE ADVISED THAT ALL ADMISSIONS FORMS AND RELATED INFORMATION LISTED BELOW SHOULD BE DIRECTED TO McDOWELL TECHNICAL INSTITUTE IN CARE OF THE OFFICE OF STUDENT PERSONNEL SERVICES.

Applicants may be admitted to the Appalachian State University Extension Program by meeting the following requirements:

1. A completed application for admission. Appalachian State University requires a $10.00 application fee.
2. Graduation from an accredited high school and rank in the upper seventy-five per cent of their graduating class. If the applicant is not a high school graduate, a High School Equivalency Certificate is required.
3. Satisfactory recommendation by the high school principal and/or guidance counselor.
4. Presentation of at least two units of high school mathematics (2 units of algebra or 1 unit each in algebra and geometry).
5. Satisfactory scores on the College Entrance Examination Board Scholastic Aptitude Test.

This test is required of every applicant for freshman admission and is given in November, December, January, March, May, and July. End of junior year (in high school) scores are used to determine eligibility for freshman admission when reported with early applications. It is recommended that the test be taken at the end of the junior year of high school and repeated early in the senior year of high school.

A student wishing to take this test should procure an application form from his secondary school or should write directly to the College Entrance Examination Board, Box 592, Princeton, New Jersey, for **the Bulletin of Information,** which includes an application form and is available without charge. The Bulletin lists test centers and gives complete information concerning tests.

The student must make his own arrangements well in advance of a selected testing date so that his application is received in Princeton before the deadline for filing applications.

6. A satisfactory health record. The complete medical history of each applicant must be submitted on the medical form supplied by the Admissions Office after approval has been given.

TECHNICAL DIVISION

The applicant must be a graduate of an accredited secondary high school or he must have been awarded a high school equivalency certificate.

VOCATIONAL DIVISION

The applicant must be at least eighteen years of age.

TRANSFER STUDENTS

The Institute will accept any transfer student, who has maintained a satisfactory conduct standing in his previous institution. Credits and their respective quality points will be granted for courses similar in content, objective, and quality to those included in the North Carolina Community College System, as well as from other accredited colleges, Technical Institutes, Business and Vocational Institutions.

Students on disciplinary suspension from other institutions are not eligible for admission.

Transfer students are required to submit a **LETTER OF GOOD STANDING** from previous institutions attended. In addition, students transferring less than 15 quarter hours of acceptable credit will be required to take the Placement Test Battery.

Tuition, Fees and Refunds . . . .

McDowell Technical Institute receives financial support from local, state and federal sources, allowing each student an educational opportunity at minimum cost. Tuition fees are set by the State Board of Education and are subject to change without notice. Cost of textbooks and supplies are additional expenses which vary according to the program of study. The payment of fees is required at the time of registration. If a student cannot pay his fees at the specified time, he is required to make some arrangement with the Business Office before his registration is complete.

The Tuition Schedule Is Explained As Follows:

COLLEGE TRANSFER DIVISION

Application Fee (Non-refundable)	$10.00
Student Activity Fee (Initial quarter only)	3.00
11 quarter hours or more (per quarter)	32.00
Less than 11 quarter hours (per quarter hour)	2.50

NOTE: Students enrolled in the college extension program offered by Appalachian State University are subject to the same tuition fee schedule that is applicable to other programs of study offered at McDowell Technical Institute.

TECHNICAL DIVISION

Application Fee (Non-refundable)	$ 5.00
Student Activity Fee (Initial quarter only)	3.00
11 quarter hours or more (per quarter)	32.00
Less than 11 quarter hours (per quarter hour)	2.50

VOCATIONAL DIVISION

Application Fee (Non-refundable)	$ 5.00
Student Activity Fee (Initial quarter only)	3.00
11 quarter hours or more (per quarter)	32.00
Less than 11 quarter hours (per quarter hour)	2.50

REFUND POLICY

The Institute has and maintains the following policies for the refund of tuition in the event the person fails to enter, withdraws, or is discontinued from his program of study prior to completion:

(A) "Tuition refund for students shall not be made unless the student is, in the judgement of the Institute, compelled to withdraw for unavoidable reasons. In such cases, two-thirds of the tuition of the student's tuition may be refunded if the student withdraws within ten calendar days after the first day of classes as published in the school calendar. In the event that a course or curriculum fails to materialize, the entire tuition will be refunded."

(B) "Veterans and war orphans receiving benefits under Title 38, U.S. Code, will be refunded the pro rata portion of the tuition fee not used up at the time of their withdrawal from the Institute."

Academic Information . . . .

CLASS ATTENDANCE

Every student is expected to attend classes regularly to get full benefits from his program of study. If a class is missed, the student is responsible for all class work and assignments. THER IS NO SYSTEM OF CLASS CUTS. If the student misses a class three consecutive days, he will be reported to the Director of Student Personnel. He will not be permitted to re-enter class until written approval to do so is submitted to the class instructor by the Director of Student Personnel.

ACADEMIC CONTINUATION AND DIVISIONAL REFERRAL

Any student whose cumulative grade point average is less than 1.00 at the end of any quarter will be instructed to report to the Director of Student Personnel for counseling. The sole purposes of these meetings is to attempt to identify the problems the student has encountered. If mutually agreed, the student may be referred to another program for whcih he is better qualified.

REPEATING COURSES

There is no provision for allowing students to repeat courses. In addition, the Institute requires that a student earn an overall 2.00 grade point average with all grades being passing or better, in order to be a candidate for graduation.

Students are advised to consult with their respective instructors or the Student Personnel Counseling staff if they are in danger of failing a course.

GRADING SYSTEM

McDowell Technical Institute is on a quarter system. Grades will be issued at the conclusion of each quarter based on the following system:

Grade	Numerical Range	Significance	Quality Points
A	93-100	Excellent	4 per quarter hour
B	86-92	Good	3 per quarter hour
C	78-85	Fair	2 per quarter hour
D	70-77	Passed	1 per quarter hour
F	Below 70	Failed	0
W	—	Withdrawal	0
WP	—	Withdrawal Passing	0
WF	—	Withdrawal Failing	0
I	—	Incomplete	0
AU	—	Audit	0
S	—	Satisfactory	0
U	—	Unsatisfactory	0

A grade of "I" is assigned when the course work is incomplete. This grade can be removed if the course work is completed satisfactorily within six weeks starting from the registration date of the following quarter.

Grade point averages are determined by dividing the total number of quality points by the number of hours attempted. If a course is repeated, the last grade will be used in determining a student's hour-quality point ratio. A ratio 2.00 indicates that the student has an average of C; above 2.00 indicates that the student has an average of above a C; below 2.00 indicates that he has an average below C.

WITHDRAWAL FROM THE INSTITUTE

To officially withdraw from the Institute or from a course, the student must follow these procedures:

1. The student will report to the Director of Student Personnel Services and request that he be withdrawn from classes.

2. The official date of a student's withdrawal from the institute is the exact date that he makes his request for withdrawal. The student Personnel Office notifies each instructor of the name of the student and the official date of his withdrawal.

3. A student may withdraw during the first two weeks of the quarter without scholastic penalty. This procedure, if followed will entitle the student to have his permanent record show the notation "withdrawn". This notation indicates good standing and the privilege of readmission.

4. Any student who withdraws after the first two weeks of the quarter will receive a grade of "WP" or "WF". A student who withdraws unofficially from the Institute without following official procedures will receive the grade of "F" in each course that he is registered for.

SCHEDULE CHANGES

All changes involving dropping or adding of course(s) shall be adjusted during the first ten days of classes each quarter. The Following steps must be adhered to before changes are official:

1. The Student secures a Registration Change Notice from the Student Personnel Office.

2. Individual schedule changes must be approved by the appropriate instructor.

3. Notification of schedule changes must be acknowledged and recorded by the Student Personnel Office.

A student may change his academic schedule during the prescribed period without scholastic penalty. However, any course dropped after the first ten days of classes will be marked WP (Withdrew Passing) or WF (Withdrew Failing). A WF carries the same stigma as an F (Failure).

EXAMINATIONS

Final examinations in all subjects will be held in November, March, April and August respectively. The examination score combined with the student's record in class will constitute the final grade.

COURSE NUMBERING

Courses in McDowell Technical Institute's catalog are numbered in accordance with the North Carolina Department of Community College System.

1. (a) All Freshman technical courses are indicated by a prefix, numbered between 100-199 and preceded by the letter "T".

(b) All sophomore technical courses are indicated by a prefix, numbered between 200-300, and preceded by the letter "T".

2. All vocational courses are indicated by a prefix and numbered between 1000-2000.

3. All adult education courses beyond the high school are indicated by a prefix and numbered 2000-3000.

4. All high school courses are numbered according to the North Carolina Public School course number system.

GRADE REPORTS

Final grade reports are furnished to the student approximately two weeks following the end of each quarter.

GRADUATION REQUIREMENTS

The following list constitutes the minimum requirements for the Associate in Applied Science degree and State Diploma:

1. Complete all course requirements as outlines by curriculums. Achieve an overall grade point average of 2.00 or above with all grades being passing or better.

2. Students who fail individual subjects or have incomplete grades must make up such deficiencies before being allowed to graduate.

3. Applications for graduation must be submitted to the Student Personnel Office one quarter prior to the completion of course requirements.

4. Be present for graduation exercises which are held during the latter part of August each year. Any exception to this requirement must be made in writing and approved by the President of the Institute.

5. Fulfill all financial obligations to the Institute.

ACADEMIC HONORS

The PRESIDENT'S LIST is designed to recognize all students whose academic performance is outstanding.

In order to qualify for the President's List, a student must carry at least twelve (12) hours of credit work during the quarter and achieve a 3.00 grade point average for the quarter.

Student Services........................

OFFICE OF STUDENT PERSONNEL SERVICES

All student services and activities are coordinated through the Student Personnel Office.

The Director of Student Personnel and staff members are available to provide assistance to individual students and groups on matters affecting student well being. Specifically, students are encouraged to seek information on policies and procedures of the Institute, and guidance on academic and personal matters.

The Student Personnel Office operates for the benefit of all students enrolled at the Institute. Occupational and educational information is available and students are encouraged to utilize this material.

PLACEMENT SERVICES

The Institute will assist all students in securing full-time employment after graduation. Every effort will be made to satisfy the wishes of a graduate as to location, type of employment, and matching particular qualifications to the requirements of a prospective employer.

During the Spring and Summer quarters, students will be instructed to fill out a Personal Data Sheet. The Office of Student Personnel Services contacts various businesses and industries within its service area each year to learn of available employment opportunities. Once contact has been established, the following procedures are adhered to for the purpose of employment referral:

1. The Placement Office will receive job orders from prospective employers denoting work needs.

2. Copies of student's Personal Data Sheet and Permanent Record are forwarded to the prospective employer for review.

3. If the employer is interested in the student's qualifications, he will contact the student for the purpose of setting up an interview.

HEALTH SERVICES

The Institute does not have a Health Clinic to provide medicine, hospitalization or emergency services, nor does the college assume responsibility for injuries occuring on campus. Minor injuries can be treated in the Student Personnel Office. All emergency treatment is referred to the Marion General Hospital.

Each student is issued a first aid booklet during Fall Quarter Orientation to encourage him to maintain good safety habits.

HOUSING

McDowell Technical Institute is a commuter institution and does not provice living accommodations for students. However, if the student desires to live in the community while attending classes, the Student Personnel Office will assist him in locating suitable housing.

STUDENT INSURANCE

Certain risks are inherent in any work involving regular contact with mechanical and electrical equipment. While precautions are taken to insure safety, it is felt to be in the best interest of all students to provide some measure of student protection.

At a nominal cost to students, the Institute has authorized a **voluntary** group accident program. Coverage extends for the entire year for a cost of $2.50 per person. Applications for coverage can be secured in the Student Personnel Office.

STUDENT LOUNGE

Light lunches can be secured from food and drink vending machines in the Student Lounge.

ORIENTATION

Each Fall Quarter, an Orientation program is held for new students to acquaint them with basic ideas, procedures, academic areas, administrative personnel and services of the Institute. The primary purpose for scheduling this program is to inform new students of important information about the Institute in an effort to assist him in making an easy transition to new surroundings.

TRANSCRIPTS OF PERMANENT RECORDS

Upon request by the student, a record of academic credit earned at McDowell Technical Institute will be sent to any educational institution or perspective employer.

Each student is entitled to one official transcript of his work, providing all accounts with the Institute have been settled satisfactorily. A student requesting an additional transcript(s) will be charged $.50 per transcript for this service.

GRADUATION, CAPS AND GOWNS AND CLASS RINGS

All orders for class rings, caps and gowns, and graduation invitations will be made through the Student Personnel Office. Notices will be posted relevant to dates for measurements. Students are urged to be prompt when making these orders.

STUDENT ACTIVITIES AND ORGANIZATIONS

The Institute believes that programs of recreation, entertainment and cultural activities play a major role in the overall development of a student body.

A Student Government Association has been established to work towards three basic objectives:

1. To represent the students to the administration and general public in an effort to promote good will and understanding for McDowell Technical Institute.

2. To engage in a democratic form of self government.

3. To approve student programs in order that they may be performed in the best interest of the student body.

DRAFT DEFERMENTS

Selective Service requires evidence of enrollment for all students registered with them within 30 days after school opens each year. IT IS THE STUDENT'S RESPONSIBILITY TO SUBMIT THE REQUEST FOR DEFERMENT FORM THROUGH THE STUDENT PERSONNEL OFFICE SO THAT ENROLLMENT CAN BE VERIFIED. These forms are made available during registration and may be obtained at any time in the Student Personnel Office.

VETERANS AFFAIRS

All programs of instruction available at the Institute are approved for training for veterans who are entitled to educational benefits under Chapter 34 and 35 of Title 38, United States Code (G. I. Bill).

The following steps should be followed in verifying eligibility:

1. The veteran fills out an application for benefits at the nearest Veterans Administration Office. The Veterans Administration Service Office serving McDowell County is located in the County Courthouse Building in Marion.

2. The VA office will send the veteran's application to the Regional Office serving the State. This office will acknowledge the veterans eligibility by mailing him a Receipt of Claim card.

3. Final verification of a veteran's entitlement is the Certificate of Eligibility. This important document must be submitted to the Student Personnel Office for certification after the veteran enrolls for classes.

The following hours constitute what is considered full-time, three quarter time, and one-half time, by VA regulations for each division:

COLLEGE TRANSFER DIVISION

Full-time	14 quarter hours of credit
3/4 time	10-13 quarter hours of credit
1/2 time	7-9 quarter hours of credit

TECHNICAL DIVISION

Full-time	25 clock hours per week
3/4 time	18-24 clock hours per week
1/2 time	12-17 clock hours per week

VOCATIONAL DIVISION

Full-time	30 clock hours per week
3/4 time	22-29 clock hours per week
1/2 time	15-21 clock hours per week

Students in technical and vocational programs will not be classified as full-time students for benefits under the G. I. Bill unless technical students are enrolled for twenty-five clock hours per week and vocational students for thirty hours per week. **When in any quarter the total weekly contact hours listed are fewer than twenty-five in a technical curriculum and fewer than thirty hours in a vocational trade curriculum, a student may enroll on request for additional instructional hours deemed by the institution to be consistent with the program and appropriate to the student to make up twenty-five hours per week in a technical curriculum or sufficient hours of attendance to make up thirty hours per week in a vocational trade curriculum.**

The contact hours shown in the catalog are minimal. It is the policy of this institution to permit students to enroll in additional subjects and laboratory work beyond those shown in the catalog in order to broaden this training.

VOCATIONAL REHABILITATION

Vocational Rehabilitation is a program operated through the Division of Vocational Rehabilitation in cooperation with the North Carolina Department of Public Instruction and the Federal Office of the Vocational Rehabilitation Administration. The Division is financed by State and Federal Funds. Vocational Rehabilitation offers such services as are necessary to enable a physically or mentally-handicapped person to become self-supporting. Financial assistance is available for training at McDowell Tech. for eligible handicapped persons.

If a prospective student has a physical disability or is limited in his activity because of a disability he should contact the Division of Vocational Rehabilitation office nearest him. The Division Office for Western North Carolina is located in Asheville.

Student Responsibilities . . . .

CONDUCT

The conduct of a student, both in and out of school, will be measured on an adult standard. He assumes full responsibility for the consequences of his actions and behavior. Each student should accept as his personal responsibility to uphold the rules and regulations of McDowell Technical Institute. The Institute reserves the right to dismiss any student who in its judgment conducts himself in a manner that is not in compliance with the purposes of this institution.

DRESS

While the Institute aims to honor the individuality of each student, it reserves the prerogative to announce and implement regulations concerning dress.

TRAFFIC REGULATIONS

The maximum speed permitted on campus shall not exceed 30 M.P.H. Reckless driving observed on campus will result in disciplinary action. Students are warned to park their cars in assigned student parking areas.

STANDARDS

The following standards apply to all students enrolled in this institution:

1. Each student is held responsible for information published through notices and announcements placed on the bulletin board.

2. Students who **negligently** lose, damage, destroy or dispose of school property placed in their possession or entrusted to them will be charged for the full extent of the damage or loss and are subject to disciplinary action.

3. Excessive noise will not be tolerated within the buildings. Students are asked to conduct their conversations in the Student Lounge or outside the buildings.

4. Smoking is prohibited in all classrooms and shop areas at all times. Smoking is permitted in the Student Lounge, in the halls, and outside the building.

Additional information on rules and regulations is contained in the STUDENT HANDBOOK. **It is the individual responsibility of each student to read and understand this HANDBOOK.**

CURRICULUM

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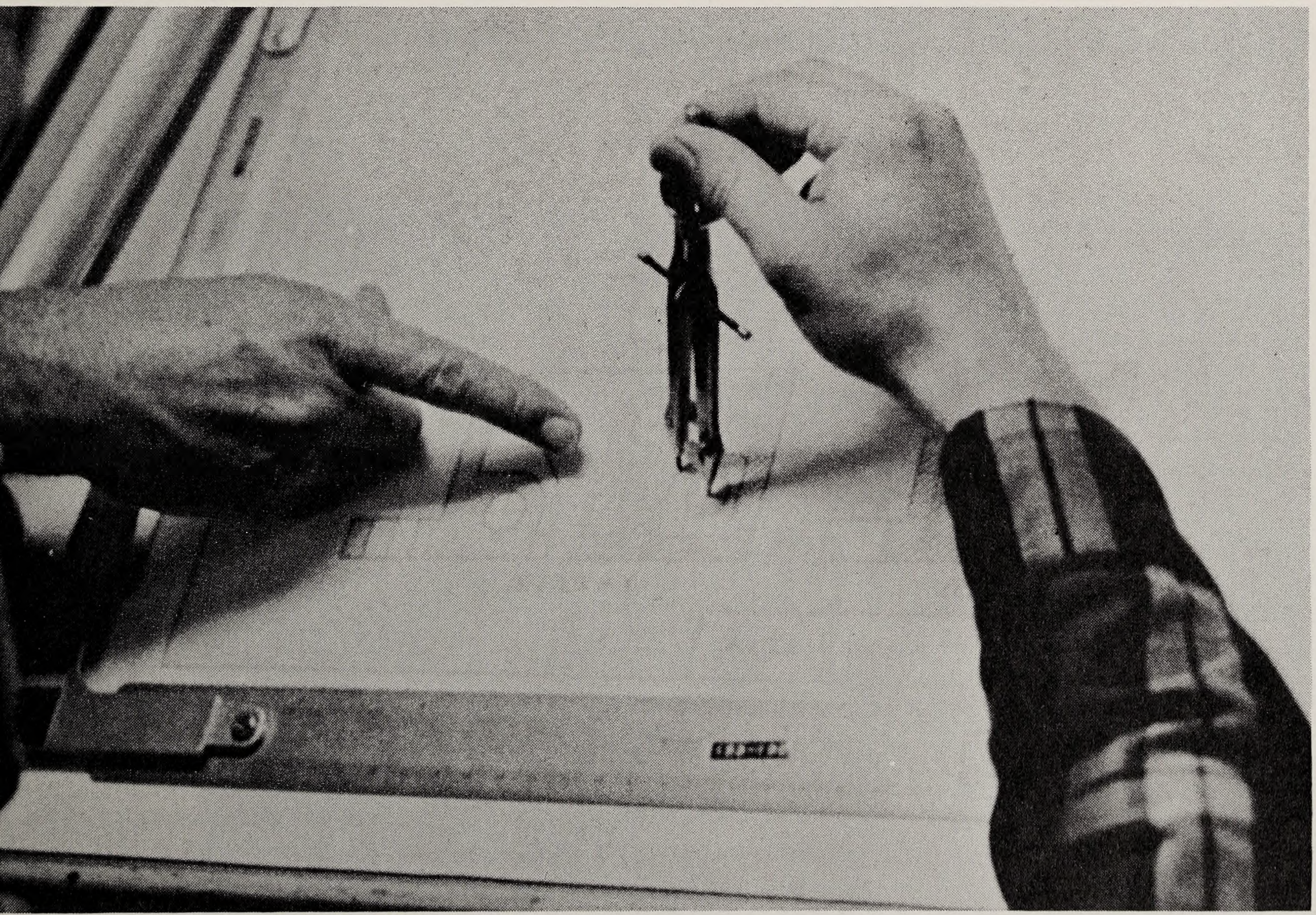
INSTRUCTIONAL PROGRAMS

COLLEGE TRANSFER DIVISION
- APPALACHIAN STATE UNIVERSITY EXTENSION PROGRAM

TECHNICAL DIVISION
- BUSINESS ACCOUNTING
- BUSINESS ADMINISTRATION
- EXECUTIVE SECRETARIAL
- HOSPITAL PLANT MAINTENANCE AND ENGINEERING
- TRAFFIC AND TRANSPORTATION

VOCATIONAL DIVISION
- AUTO BODY REPAIR
- AUTO MECHANICS
- BUSINESS SECRETARIAL
- ELECTRICAL INSTALLATION AND MAINTENANCE
- MECHANICAL DRAFTING
- WELDING

EXTENSION AND ADULT EDUCATION DIVISION



COLLEGE TRANSFER DIVISION

A Two Year Program
of Study Offered At
McDowell Technical Institute by
Appalachian State University

APPALACHIAN STATE UNIVERSITY EXTENSION PROGRAM

McDowell Technical Institute offers a two year program of college credit for students who intend to transfer to Appalachian State University. Persons enrolling in this program will become students of Appalachian State University and are subject to **THEIR** admission requirements. Courses will be offered at full credit and are transferable at face value. The student will be able to earn approximately 90 quarter hours of credit (the equivalent of two years of college work).

FIRST YEAR PROGRAM

First Quarter

Course No.	Course Title	Credit Hours
English 101	Grammar & Composition	3
History 101	World Civilization	3
Math 101	Intorduction to Math	5
Physical Education 110	Physical Fitness	1
Speech 101	Fund. of Speech	3
	Total	15

Second Quarter

English 102	Grammar & Composition	3
History 102	World Civilization	3
Political Science 201	Amer. Nat. Government	3
Geography 101	Physical Geography	5
Physical Education 115	Folk & Social Dance	1
	Total	15

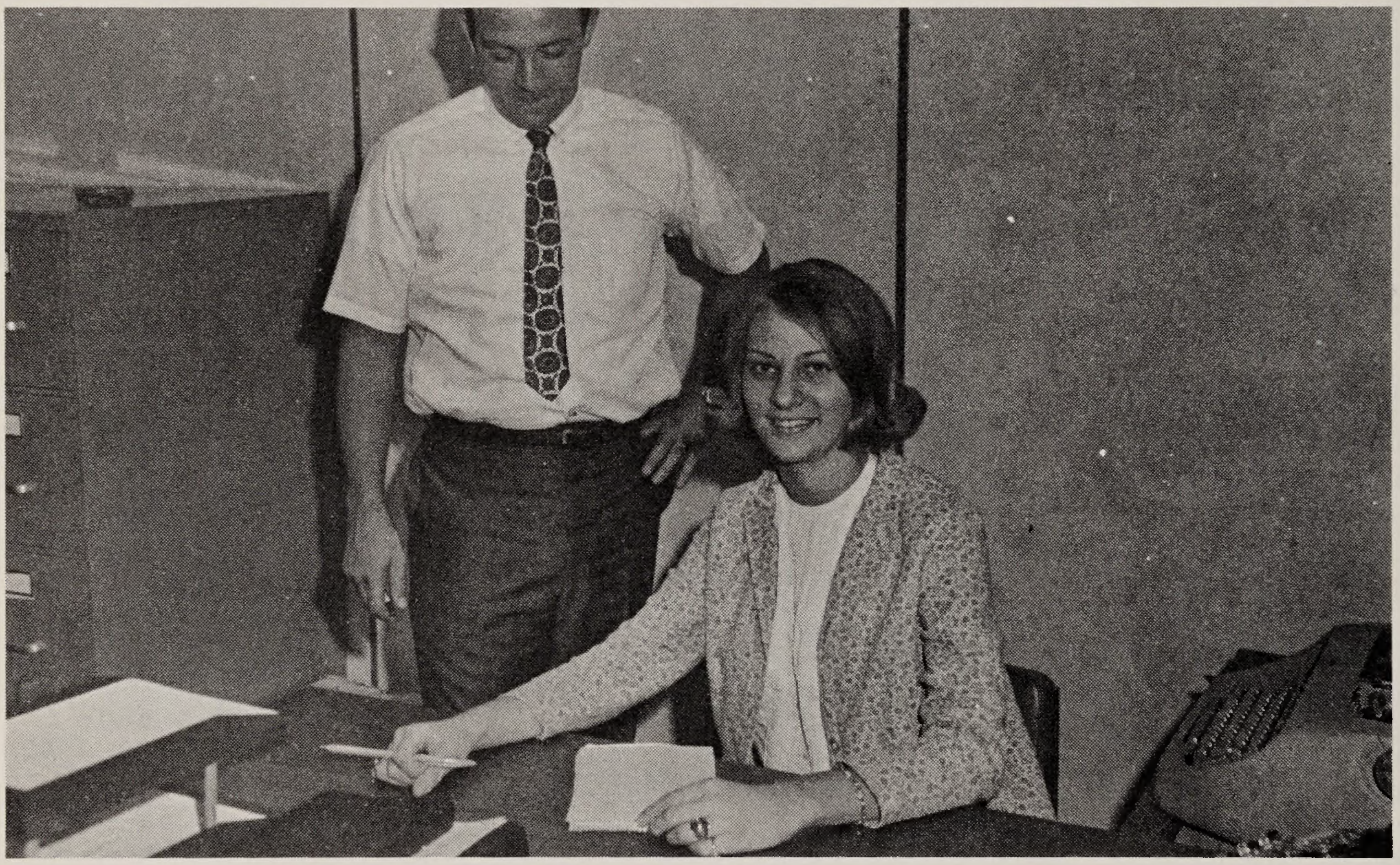
Third Quarter

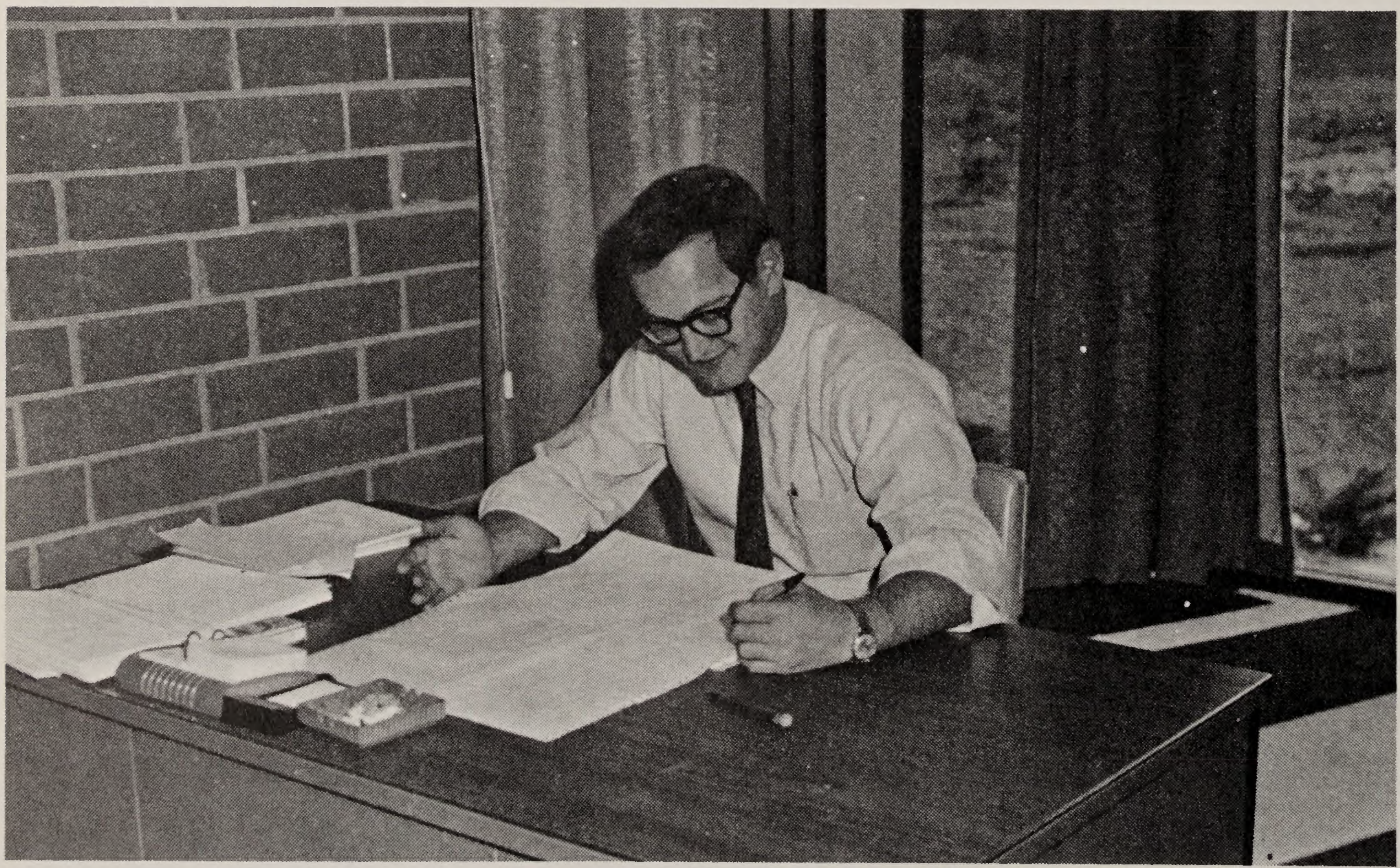
English 103	Grammar & Composition	3
History 103	World Civilization	3
Art 217	Introduction to Art	3
Geography 102	World Regions	5
Physical Education 114	Tennis & Badminton	1
	Total	15

The second year's program is now in the process of being formulated. Included in the tentative schedule are additional courses in Humanities, Natural Sciences and Social Sciences.

TECHNICAL DIVISION

Two-Year Programs of Study





BUSINESS ACCOUNTING

Accounting is one of the fastest growing employment fields in America today. Because of this tremendous growth, there is an increasing need for trained people in this area. The Accounting Curriculum is designed to offer the necessary accounting theories and skills for entry into the accounting profession.

The duties and responsibilities of an accountant vary somewhat in different firms. Some of these duties are to record transactions, render periodic reports, maintain cost records, complete tax returns, audit the books, and advise management in areas of financial affairs.

The graduate of this curriculum may qualify for jobs in business and industry leading to one of the following accounting positions: accounting clerk, payroll clerk, or related occupations.

FIRST QUARTER

	Hours Per Week		
	Class	Lab	Qtr hrs.
T-ENG 101 Grammar	3	0	3
T-BUS 102 Typewriting (or Elective) I.	2	3*	3
T-Mat 110 Business Math	5	0	5
T-BUS 101 Intro. to Business	5	0	5
T-ECO 102 Economics I	3	0	3
	18	3	19

SECOND QUARTER

	Class	Lab	Qtr hrs.
T-ENG 102 Composition	3	0	3
T-BUS 120 Accounting I	5	2	6
T-ECO 104 Economics III	3	0	3
T-BUS 115 Business Law I	3	0	3
T-BUS 123 Business Finance I	3	0	3
	17	2	18

THIRD QUARTER

	Class	Lab	Qtr hrs.
T-ENG 103 Report Writing	3	0	3
T-BUS 124 Business Finance II	3	0	3
T-BUS 110 Office Machines I	2	2	3
T-BUS 121 Accounting II	5	2	6
T-BUS 116 Business Law II	3	0	3
	16	4	18

FOURTH QUARTER

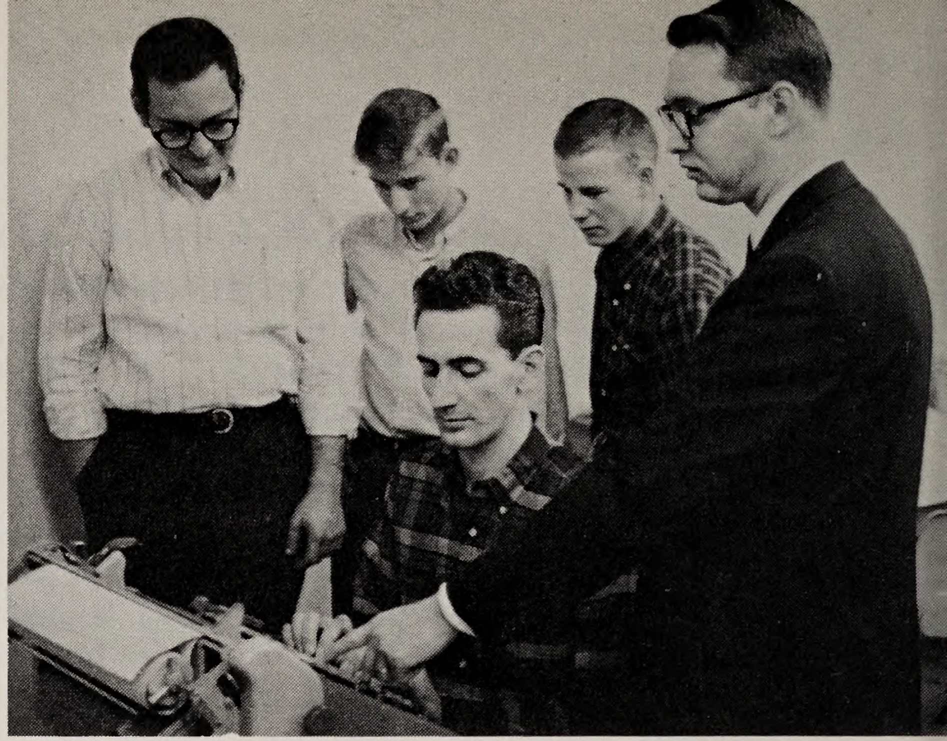
	Class	Lab	Qtr hrs.
T-ENG 204 Oral Communication	3	0	3
T-EDP 104 Intro. Data Processing I.	3	2	4
T-BUS 222 Accounting III	5	2	6
Elective	6	0	6
	17	4	19

FIFTH QUARTER

	Class	Lab	Qtr hrs.
T-ENG 206 Business Communication	3	0	3
T-BUS 223 Accounting IV	5	2	6
T-BUS 225 Cost Accounting	3	2	4
T-BUS 235 Business Management	3	0	3
Elective	3	0	3
	17	4	19

SIXTH QUARTER

	Class	Lab	Qtr hrs.
T-BUS 229 Taxes	3	2	4
T-BUS 269 Auditing	3	2	4
Social Science Elective	3	0	3
Elective	4	0	4
	13	4	15



Business Administration

PURPOSE OF CURRICULUM

With the increasing population and industrial development in this State, business has become more competitive and automated. Better opportunities in business will be filled by students with specialized education beyond the high school level. The Business Administration Curriculum is designed to prepare the student for employment in one of many occupations common to business. Training is aimed at preparing the student in many phases of administrative work that might be encountered in the average business.

The specific objectives of the Business Administration Curriculum are to develop the following competencies:

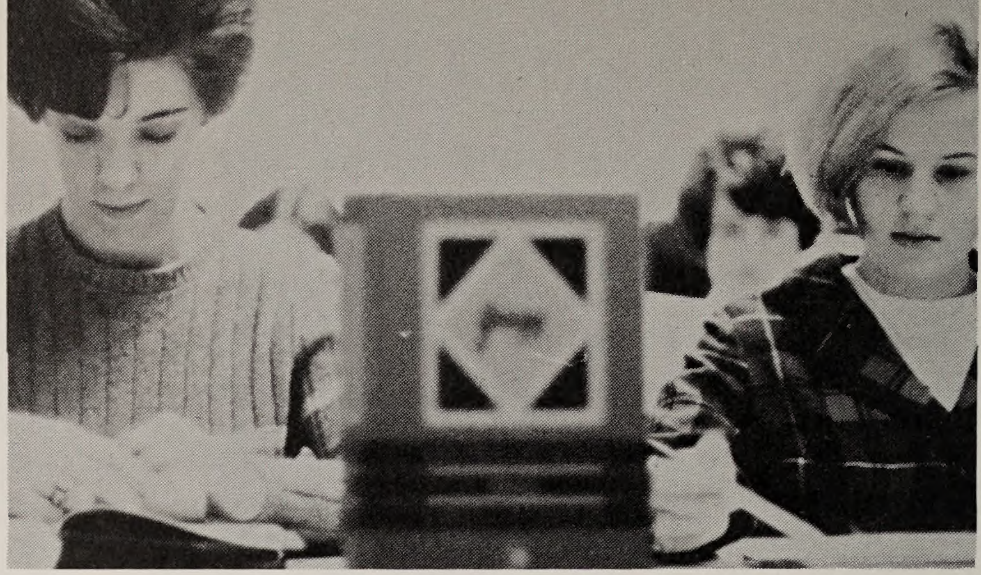
1. Understanding of the principles of organization and management in business operations.
2. Understanding our economy through study and analysis of the role of production and marketing.
3. Knowledge in specific elements of accounting, finance, and business law.
4. Understanding and skill in effective communication for business.
5. Knowledge of human relations as they apply to successful business operations in a rapidly expanding economy.

JOB DESCRIPTION

The graduate of the Business Administration Curriculum may enter a variety of career opportunities from beginning sales person or office clerk to manager trainee. The duties and responsibilities of this graduate vary in different firms. These encompassments might include: making up and filing reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, operating various office machines, and assisting managers in supervising. Positions are available in businesses such as advertising; banking; credit; finance; retailing; wholesaling; hotel, tourist and travel industry; insurance; transportation; and communications.

	Hours Per Week		
First Quarter	Class	Lab	Qtr hrs.
T-ENG 101 Grammar	3	0	3
T-BUS 102 Typewriting (or Elective)	2	3	3
T-MAT 110 Business Mathematics	5	0	5
T-BUS 101 Introduction to Business	5	0	5
T-ECO 102 Economics	3	0	3
	18	3	19

	Hours Per Week		
Second Quarter	Class	Lab	Qtr hrs.
T-ENG 102 Composition	3	0	3
T-BUS 120 Accounting	5	2	6
T-ECO 104 Economics	3	0	3
T-BUS 115 Business Law	3	0	3
T-BUS 123 Business Finance	3	0	3
	17	2	18
Third Quarter			
T-ENG 103 Report Writing	3	0	3
T-BUS 124 Business Finance	3	0	3
T-BUS 110 Office Machines	2	2	3
T-BUS 121 Accounting	5	2	6
T-BUS 116 Business Law	3	0	3
	16	4	18
Fourth Quarter			
T-ENG 204 Oral Communication	3	0	3
T-BUS 232 Sales Development	3	0	3
T-EDP 104 Introduction to Data Processing Systems	3	2	4
T-BUS 239 Marketing	5	0	5
Elective	3	0	3
	17	2	18
Fifth Quarter			
T-ENG 206 Business Communication	3	0	3
Social Science Elective	3	0	3
T-BUS 243 Advertising	3	2	4
T-BUS 235 Business Management	3	0	3
Elective	3	0	3
	15	2	16
Sixth Quarter			
Social Science Elective	3	0	3
T-BUS 229 Taxes	3	2	4
T-BUS 272 Principles of Supervision	3	0	3
T-BUS 271 Office Management	3	0	3
Elective	6	0	6
	18	2	19



Executive Secretary

PURPOSE OF CURRICULUM

The demand for better qualified secretaries in our expanding business world is becoming more acute. The purpose of this curriculum is to outline a training program that will provide training in the accepted procedures required by the business world, and to enable persons to become proficient soon after accepting employment in the business office.

The Executive Secretary Curriculum is designed to offer the students the necessary secretarial skills in typing, dictation, transcription, and terminology for employment in the business world. The special training in secretarial subjects is supplemental by related courses in mathematics, accounting, business law, and personality development.

JOB DESCRIPTION

The graduate of the Executive Secretary Curriculum should have a knowledge of business terminology, skill in dictation, and accurate transcription of business letters and reports. The graduate may be employed as a stenographer or a secretary. Stenographers are primarily responsible for taking dictation and transcribing letters, memoranda, or reports. The secretary, in addition to taking dictation and transcribing, is given more responsibility in connection with meeting office callers, screening telephone calls, and being an assistant to an executive. She may enter a secretarial position in a variety of offices in businesses such as insurance companies, banks, marketing institutions, and financial firms.

	Hours Per Week		
FIRST QUARTER	Class	Lab	Qtr hrs.
T-ENG 101 Grammar	3	0	3
T-BUS 102 Typewriting (Or Elective)	2	3	3
T-MAT 110 Business Mathematics	5	0	5
T-BUS 101 Introduction to Business	5	0	5
T-BUS 106 Shorthand (Or Elective)	3	2	4
	18	5	20
SECOND QUARTER			
T-ENG 102 Composition	3	0	3
T-BUS 103 Typewriting (Or Elective)	2	3	3
T-BUS 107 Shorthand	3	2	4
T-BUS 120 Accounting	5	2	6
T-BUS 115 Business Law	3	0	3
	16	7	19
THIRD QUARTER			
T-ENG 103 Report Writing	3	0	3
T-BUS 104 Typewriting	2	3	3
T-BUS 108 Shorthand	3	2	4
T-BUS 110 Office Machines	2	2	3
T-BUS 112 Filing	3	0	3
	13	7	16

	Hours Per Week		
	Class	Lab	Qtr hrs.
FOURTH QUARTER			
T-ENG 204 Oral Communication	3	0	3
T-BUS 206E Dictation and Transcription (Executive)	3	2	4
T-BUS 205 Advanced Typewriting	2	3*	3
T-BUS 211 Office Machines	2	2	3
T-EDP 104 Introduction to Data Processing Systems	3	2	4
	13	9	17
FIFTH QUARTER			
T-ENG 206 Business Communication	3	0	3
T-BUS 207E Dictation and Transcription (Executive)	3	2	4
T-BUS 214 Secretarial Procedures	3	2	4
General Business Elective	3	0	3
Elective	6	0	6
	18	4	20
SIXTH QUARTER			
Social Science Elective	3	0	3
T-BUS 208E Dictation and Transcription (Executive)	3	2	4
T-BUS 271 Office Management	3	0	3
Elective	6	0	6
	15	2	16

Hospital Plant Maintenance and Engineering

The cost of installing mechanical equipment in hospitals throughout the nation represents an enormous investment. In the past, many hospitals were willing to trust such costly installations and their fragile maintenance entirely to untrained persons.

In North Carolina, where 38 percent of the general and special hospitals are situated in communities of fewer than 5,000 population, the growing complexity of hospital equipment poses an increasing maintenance problem. It is simply a fact, that the hospital of the future will have to provide a permanent, round-the-clock maintenance program if it is to provide adequately for all aspects of patient care.

With the problem identified, North Carolina State University, with funds from a United States Public Health Grant and the North Carolina Medical Care Commission, conducted a study entitled Hospital Maintenance Demonstration Project. From this study a strong plea was made for starting a program of continuing education to train new men and update the competence of existing personnel in the design and application of specialized and sensitive equipment.

McDowell Technical Institute is the first institution within the North Carolina Department of Community Colleges to offer this unique curriculum. This program is designed to give the trainee a comprehensive series of courses covering the maintenance of mechanical and electrical equipment, the fundamental theory that governs its performance, and an introduction into the management aspects of the maintenance department.

This curriculum will provide training opportunities in three main subjects areas:

1. Electrical Installation and Maintenance
2. Air Conditioning and Refrigeration
3. Plumbing and Heating

This will be a 2 year curriculum with a 3-6 months cooperative work experience program arranged with hospitals in the area. A high school diploma or its equivalent will be required for admission to the program. This requirement will be waived for persons already employed in hospital plant maintenance and engineering fields who enroll to update their training.

HOSPITAL PLANT MAINTENANCE AND ENGINEERING TENTATIVE CURRICULUM

	Hours Per Week		
First Quarter	Class	Lab	Qtr hrs.
ELC 1112 Alternating & Direct Current	7	15	12
MAT 1101 Fundamentals of Mathematics	5	0	5
ENG 1101 Communication Skills	3	0	3
	15	15	20
Second Quarter			
ELC 1113 Alternating & Direct Current Machines and Controls	8	12	11
MAT 1102 Algebra	5	0	5
DFT 1110 Blueprint Reading—Electrical	0	3	1
ENG 1102 Communication Skills	3	0	3
	16	15	20
Third Quarter			
AHR 1121 Principles of Refrigeration	3	12	7
AHR 1122 Domestic & Commercial Refrigeration	3	9	6
PHG 1101 Applied Science	1	2	2
	7	23	15

	Hours Per Week		
Fourth Quarter	Class	Lab	Qtr hrs.
AHR 1123 Principles of Air Conditioning	3	12	7
AHR 1128 Automatic Controls	3	6	5
AHR 1124 Air Condition and Refrigeration Service	3	3	4
	9	21	16
Fifth Quarter			
PLU 1110 Plumbing Pipework	3	9	6
DFT 1115 Blueprint Reading: Plumbing Trades	0	3	1
PLU 1112 Installation of Plumbing Fixtures	3	9	6
BUS 1101 Maintenance Recordkeeping	3	0	3
	9	21	16
Sixth Quarter			
PLU 1111 Water and Stream Systems	3	12	9
PLU 1123 Hot Water & Panel Heating	3	6	5
WLD 1101 Basic Gas Welding	0	3	1
BUS 1102 Maintenance Recordkeeping	3	0	3
	9	21	18

The Cooperative Work Experience Program would be carried on between the 3rd and 4th quarters, at the end of the 6th quarter, or at both of these times.

Traffic and Transportation Technology

North Carolina, in its tremendous industrial growth, has a need for more highly trained and skilled personnel in the traffic and transportation industry. The purpose of this curriculum is to provide training in new techniques, and an understanding of the latest State and Federal regulations applicable to traffic and transportation, which should enable the student to accept employment in a higher-level job in the traffic and transportation industry.

The specific objectives of the Traffic and Transportation Curriculum are to develop: (1) understanding of the principles of organization and management in business operations and the traffic and transportation industry; (2) understanding and skill in effective communication for business; (3) understanding of the Interstate Commerce Act and related acts as they apply to traffic and transportation; and (4) understanding of the role traffic and transportation plays in the expanding business economy.

The graduate of this curriculum may seek career opportunities in the traffic and transportation industry as traffic representative, claims representative, dispatcher, rate analyst, and operational supervisor. A traffic representative is responsible for calling on the shipping public and selling the services of his respective company for their use. A claims representative renders and investigates claims for losses, shortages, damages, or overcharges on shipments of merchandise and adjusts claims. The dispatcher is responsible for dispatching men or equipment to prevent or rectify disruptions in service in all departments of a transportation system. The rate specialist determines rates, routes, and classifications applicable to merchandise or material shipped or received by common carrier. The responsibilities of the operational supervisor include the supervision of those activities that will assure the smooth and constant flow of traffic through the terminal area.

This training, combined with on-the-job experience, should qualify students for positions such as claims manager, operational manager, and manager of transportation terminals.

TRAFFIC AND TRANSPORTATION CURRICULUM

	Hours Per Week		
FIRST QUARTER	Class	Lab	Qtr hrs.
T-MAT 110 Business Mathematics	5	0	5
T-BUS 101 Introduction to Business	5	0	5
T-ECO 102 Economics	3	0	3
T-BUS 120 Accounting	5	2	6
	18	2	19
SECOND QUARTER			
T-ENG 101 Grammar	3	0	3
T-BUS 121 Accounting	5	2	6
T-BUS 115 Business Law	3	0	3
T-ECO 104 Economics	3	0	3
T-BUS 178 Traffic and Transportation	3	0	3
	17	2	18
THIRD QUARTER			
T-ENG 102 Composition	3	0	3
T-BUS 116 Business Law	3	0	3
T-BUS 179 Traffic & Transportation	3	0	3
T-BUS Business Elective	5	0	5
T-ECO 106 Economics of Transportation	3	0	3
	17	0	17

FOURTH QUARTER

	Hours Per Week		
	Class	Lab	Qtr hrs.
T-ENG 103 Report Writing	3	0	3
T-BUS 232 Sales Development	3	0	3
T-BUS 285 ICC Law	3	0	3
T-BUS 280 Traffic and Transportation	3	0	3
T-BUS 290 Motor Carrier	3	0	3
T-BUS 102 Typewriting or Elective	2	3	3
	17	3	18

FIFTH QUARTER

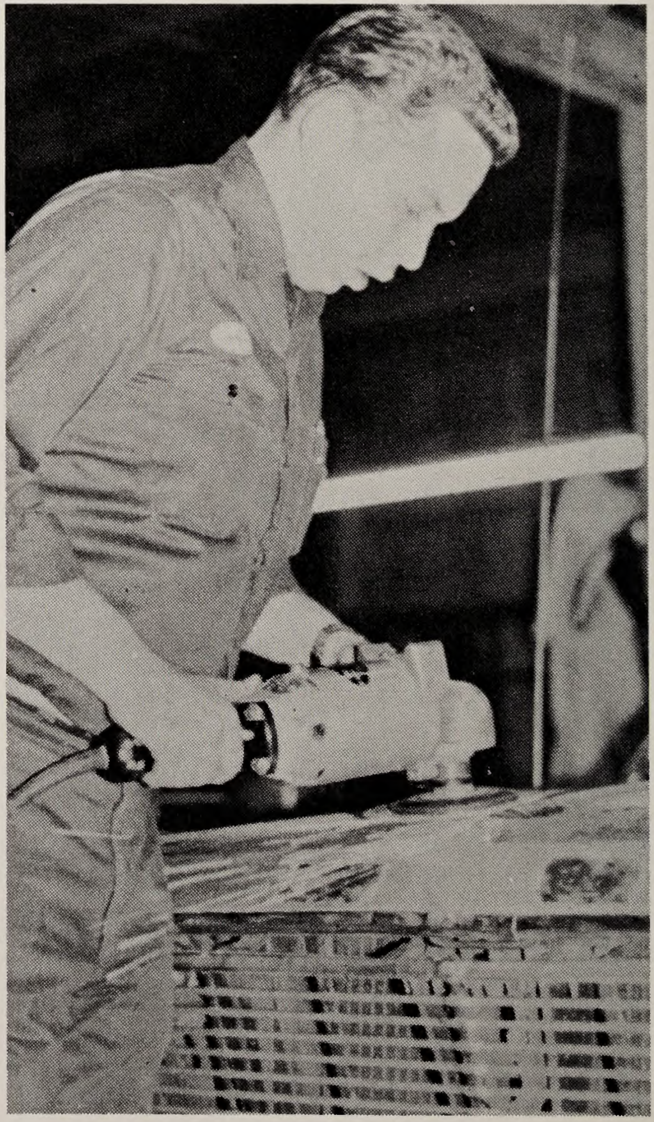
	Class	Lab	Qtr hrs.
T-ENG 204 Oral Communications	3	0	3
T-BUS 286 ICC Law	3	0	3
T-BUS 291 Motor Carrier	3	0	3
T-BUS 281 Traffic and Transportation	3	0	3
T-SSC Social Science	3	0	3
T-BUS 110 Business Machines	2	2	3
	17	2	18

SIXTH QUARTER

	Class	Lab	Qtr hrs.
T-BUS 287 ICC Law	3	0	3
T-BUS 295 Traffic Claims	3	0	3
T-BUS 299 Traffic Management	3	0	3
T-SSC Social Science Elective	3	0	3
T-ENG 206 Business Communications	3	0	3
T-BUS Business Elective	2	3	3
	17	3	18

VOCATIONAL DIVISION

One-Year Programs of Study



Auto Body Repair

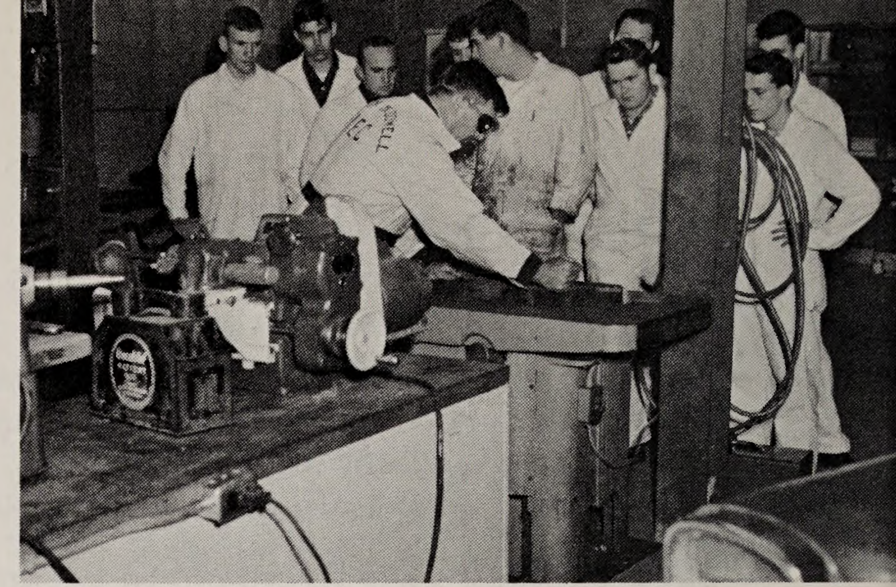
PURPOSE OF CURRICULUM

The field of automotive body repair and painting needs many more well-trained people to meet the growing demand for the many special skills in this area of employment. In this program, much of the students' time in the shop is devoted to learning skills and practicing these skills on car bodies and their component parts. Every attempt is made to make these practical experiences as close as possible to actual on the job situations. The practical experience and related training provide an ideal way to prepare the students for entry into an occupation that offers many job opportunities.

JOB DESCRIPTION

Graduates of the Auto Body Repair Curriculum are qualified for jobs in which they remove dents in automobile bodies and fenders; take off fenders and replace them with new ones; straighten frames, doors, hoods, and deck lids; and align wheels. In their work these craftsmen operate welding equipment. They also make tests on and repair engine cooling systems. Auto body repairmen shrink stretched metal and prepare it for painting. They are called on to paint fenders and/or panels as well as to paint a complete vehicle. In addition to these duties, auto body repairmen remove, cut, fit, and install glass. They are required to remove and install interior trim; cut, sew, and install headings and seat covers; repair and replace upholstery and fabric tops of vehicles; and rebuild springs and padding. This type of employment includes reading and interpreting blueprints, charts instruction and service manuals, and wiring diagrams. These repairmen also prepare orders for repairs and parts as well as estimates and statements for adjusters. After gaining experience, many of these craftsmen open their own businesses or become body shop foremen, supervisors, or managers.

	Hours Per Week		
	Class	Lab	Qtr hrs.
First Quarter			
AUT 1111 Auto Body Repair	5	9	8
MAT 1101 Fundamentals of Mathematics	5	0	5
PHY 1101 Applied Science	3	2	4
ENG 1101 Reading Improvement	3	0	3
WLD 1101 Basic Gas Welding	0	3	1
	16	14	21
Second Quarter			
AUT 1112 Auto Body Repair	5	12	9
WLD 1105 Auto Body Welding	0	3	1
DFT 1101 Schematics and Diagrams: Power Mechanics	0	3	1
PHY 1102 Applied Science	3	2	4
ENG 1102 Communication Skills	2	0	2
	10	20	17
Third Quarter			
AUT 1113 Metal Finishing and Painting	3	15	8
AUT Trim, Glass & Radiator Repair	3	9	6
	6	24	14
Fourth Quarter			
AUT 1114 Body Shop Applications	3	24	11
BUS 1103 Small Business Operations	3	0	3
	6	24	14



Auto Mechanics

This is a one-year program providing a thorough training in the theoretical as well as manual skills in servicing, testing and diagnosing. All phases of the electrical system, the power plant, braking system, the power train will be studied.

The courses are arranged in a sequence that gives the student the required technological and special courses as they are needed to coordinate his laboratory experiences.

Emphasis is placed on the mechanical parts and operation of the various automobile units. Trouble shooting and servicing of the live project is also stressed.

OCCUPATIONAL OPPORTUNITIES

Auto Mechanics, Truck and Bus Mechanic, Shop Foreman, Maintenance Supervisor, Dealer, Service Manager, Sales Technician, Factory Representative, and Experimental Lab Work are among those occupational opportunities awaiting graduates of the Automotive Mechanic Curriculum.

	Hours Per Week			
First Quarter	Class	Lab	Shop	Qtr hrs.
AUT 1121 Automotive Theory and Practice	5	0	12	9
MAT 1121 Mathematics	5	0	0	5
ENG 1101 Reading Improvement	3	0	0	3
PHY 1104 Physics	3	2	0	4
	16	2	12	21
Second Quarter				
AUT 1122 Automotive Theory and Practice	5	0	15	10
PHY 1105 Applied Physics	3	2	0	4
ENG 1102 Communication Skills	2	0	0	2
DFT 1121 Blueprint Reading	3	0	0	3
	13	2	15	19
Third Quarter				
AUT 1123 Automotive Theory and Practice	3	0	15	8
AUT 1101 Small Engine Repair	4	0	0	4
WLD 1112 Welding	0	3	0	1
PHY 1106 Applied Physics	3	2	0	4
	10	5	15	17
Fourth Quarter				
AUT 1124 Automotive Theory and Practice	3	0	12	7
SOC 1103 Management Procedures	3	0	0	3
AUT 1125 Automotive Testing and Service	3	0	9	6
	9	0	21	16

Business Secretarial

The demand for better qualified office personnel in our expanding business, medical, legal, and industrial fields is becoming more acute. The purpose of this curriculum is to outline a program that will provide training in the accepted procedures required in each of these fields and to enable persons to become proficient soon after accepting employment.

This curriculum is designed to offer students the necessary secretarial and clerical skills in typing, business machine operation, dictation, transcription, accounting, business math, and personality development for employment in all fields of business.

Graduates of this program may be employed as a stenographer, a secretary, a typist, an accounting clerk, a filing clerk, a receptionist, or a general clerical worker. In addition to taking dictation and transcribing, the secretary may be given additional responsibilities such as meeting office callers or screening telephone calls. Positions may be found in such businesses as insurance companies, hospitals, doctors' offices, law offices, and industrial firms.

	Hours Per Week		
First Quarter	Class	Lab	Qtr hrs.
ENG 101 Grammar	3	0	3
BUS 110 Typewriting	5	5	6
BUS 109 Shorthand	5	5	6
MAT 112 Business Mathematics	5	0	5
	18	10	20
Second Quarter			
ENG 102 Composition	3	0	3
BUS 111 Typewriting	5	0	3
BUS 114 Shorthand	5	0	3
BUS 117 Office Machines	2	2	3
BUS 120 Accounting	5	2	6
	20	4	18
Third Quarter			
ENG 103 Report Writing	3	0	3
BUS 112 Typewriting	5	0	3
BUS 115 Shorthand	5	0	3
BUS 118 Office Machines	2	2	3
BUS 121 Accounting	5	2	6
	20	4	18
Fourth Quarter			
BUS 113 Typewriting	5	0	3
BUS 116 Shorthand	5	0	3
BUS 122 Filing	2	2	3
BUS 123 Correspondence	5	0	4
BUS 124 Office Procedures	5	0	4
	22	2	17

Electrical Installation and Maintenance

The graduate of the electrical trades program will be qualified to enter an electrical trade as an on-the-job trainee or apprentice, where he will assist in the planning, layout, installation, check out, and maintenance of systems in residential, commercial, or industrial plants. He will have an understanding of the fundamentals of the National Electrical Code regulations as related to wiring installations, electrical circuits, and the measurements of voltage, current, power, and power factor of single and polyphase alternating circuits. He will have a basic knowledge of motor and motor control systems; industrial electronic control systems; business procedures, organization, and practices; communicative skills; and the necessary background to be able to advance through experience and additional training through up-grading courses offered in the School.

	Hours Per Week		
First Quarter	Class	Lab	Qtr hrs.
ELC 1112 Direct & Alternating Current	5	12	9
ENG 1101 Reading Improvement	3	0	3
MAT 1115 Electrical Mathematics	5	0	5
PHY 1101 Applied Science	3	2	4
	16	14	21
Second Quarter			
ELC 1113 Alternating Current and Direct Current Machines and Controls	5	15	10
DFT 1110 Blueprint Reading: Building Trades	0	3	1
ENG 1102 Communication Skills	2	0	2
PHY 1102 Applied Science	3	2	4
	10	20	17
Third Quarter			
ELC 1124 Residential Wiring	5	9	8
ELN 1118 Industrial Electronics	4	6	6
PSY 1101 Human Relations	3	0	3
DFT 1113 Blueprint Reading: Electrical	0	3	1
	12	18	18
Fourth Quarter			
ELC 1125 Commercial and Industrial Wiring	5	12	9
ELN 1119 Industrial Electronics	5	12	5
BUS 1103 Small Business Operations	3	0	3
	11	18	17

Mechanical Drafting

This curriculum is designed to prepare students to enter the field of mechanical drafting. The first two quarters contain courses basic to fields of drafting. The third and fourth quarters contain specialization and related courses that prepare one to enter mechanical drafting occupations.

Each course is prepared to enable an individual to advance rapidly in drafting proficiency upon entering the field of work. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science. The draftsman associates with many levels of personnel—administrative, architects, engineers, skilled workmen—and must be able to communicate effectively with them. Courses to develop knowledge and skills in communication, human relations, economics and industrial organization are provided to assist the student in developing understandings and confidence in his relations with other persons.

JOB DESCRIPTION

The draftsman prepares clear, complete, and accurate working plans and detail drawings from rough or detailed sketches or notes for engineering or manufacturing purposes, according to the specified dimensions: Makes final sketch of the proposed drawing, checking dimension of parts, materials to be used, the relation of one part to another, and the relation of the various parts to the whole structure. Makes any adjustments or changes necessary or desired. Inks in lines and letters on pencil drawings as required. Exercises manual skill in the manipulation of the triangle, T-square, and other drafting tools. Makes charts for representation of statistical data. Makes finished designs from sketches. Utilizes knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete the drawings.

Mechanical draftsman performs the general duties of a draftsman and also specializes in making rough drafting sketches of proposed mechanical devices, and then drawing necessary details. Prepare accurate scale drawings of parts or machines from specifications.

	Hours Per Week		
First Quarter	Class	Lab	Qtr hrs.
DFT 1121 Drafting	5	12	9
MAT 1101 Fundamentals of Math	5	0	5
ENG 1101 Reading Improvement	3	0	3
PHY 1101 Applied Science	3	2	4
	16	14	21
Second Quarter			
DFT 1122 Drafting	4	9	7
DFT 1125 Descriptive Geometry	2	3	3
MAT 1102 Algebra	5	0	5
ENG 1102 Communication Skills	2	0	2
PHY 1102 Applied Science	3	2	4
	16	14	21
Third Quarter			
DFT 1131 Mechanical Drafting	3	12	7
MAT 1103 Geometry	3	0	3
PSY 1101 Human Relations	3	0	3
MEC 1113 Shop Processes	1	3	2
MEC 1115 Strength of Materials	2	3	3
	12	18	18
Fourth Quarter			
DFT 1132 Mechanical Drafting	5	12	8
MEC 1117 Strength of Materials	2	3	3
MEC 1116 Metallurgy	2	0	2
BUS 1105 Industrial Organizations	3	0	3
MAT 1104 Trigonometry	3	0	3
	15	15	19

Welding

PURPOSE OF CURRICULUM

This curriculum was developed to fill the tremendous need for welders in North Carolina. The recently completed Manpower Surveys shows quite clearly that many welders will be needed annually to fill present vacancies in the State.

The content of this curriculum is designed to give students sound understanding of the principles, methods, techniques, skills essential for successful employment in the welding field and metals industry.

The field of welding offers a person prestige, security, and a future of continuous employment with steady advancement. It offers employment in practically any industry: shipbuilding, automotive, aircraft, guided missiles, railroads, construction, pipe fitting, production shop, job shop, and many others.

JOB DESCRIPTION

Welders join metals by applying intense heat, and sometimes pressure, to melt the edges to form a permanent bond. Closely related to welding is "oxygen cutting." Of the more than 35 different ways of welding metals, arc, gas, and resistance welding are the three most important.

The principal duty of the welder using manual procedure is to control the melting by directing the heat, from an electric arc or gas welding torch, and to add filler metals where necessary to complete the joint. He should possess a great deal of manipulative skill with a knowledge of jigs, welding symbols, mathematics, basic metallurgy, and blueprint reading.

	Hours Per Week		
First Quarter	Class	Lab	Qtr hrs.
WLD 1120 Oxyacetylene Welding and Cutting	5	9	8
MAT 1101 Fundamentals of Mathematics	5	0	5
DFT 1104 Blueprint Reading: Mechanical	0	3	1
PHY 1101 Applied Science	3	2	4
ENG 1101 Reading Improvement	3	0	3
	16	14	21
Second Quarter			
WLD 1121 Arc Welding	5	12	9
MAT 1102 Mathematics	3	0	3
DFT 1117 Blueprint Reading: Welding	0	3	1
PHY 1102 Applied Science	3	2	4
ENG 1102 Communication Skills	2	0	2
	13	17	19
Third Quarter			
WLD 1124 Pipe Welding	5	12	9
WLD 1123 Inert Gas Welding	2	3	3
WLD 1112 Mechanical Testing and Inspection	2	3	3
DFT 1118 Pattern Development and Sketching	0	3	1
	9	21	16
Fourth Quarter			
WLD 1122 Commercial & Industrial Practices	3	9	6
WLD 1125 Certification Practices	3	6	5
MEC 1112 Machine Shop Processes	0	6	2
BUS 1105 Industrial Organizations	3	0	3
	9	21	16

EXTENSION
ADULT EDUCATION

Programs of Study

EXTENSION AND ADULT EDUCATION DIVISIONS

GENERAL INFORMATION

An important function of MTI is to provide general educational opportunities for adults in McDowell, Mitchell and Yancey Counties. The Institute will offer on a continuing basis a number of courses under these divisions. These courses are for upgrading, updating, skill improvement, high school completion, or general interest. Additional information may be obtained on this program by contacting McDowell Technical Institute.

EXTENSION

McDowell Technical Institute offers non-credit extension programs in a variety of subject areas ranging from upgrading and updating to a student's present occupation through a particular extension class to classes of general interest and self improvement.

Classes are usually offered in the evenings and in a location appropriate to the course. In most cases ten enrollees are required before an extension class can begin.

Length of extension classes may be as little as eight hours or as much as 144 hours.

Examples of extension offerings of a non-curricular nature which could be offered include:

Creative Salesmanship
Supervisory Development Training
Small Engine Repair

Personal Investment
First Aid
Income Tax Return (Personal)
Law Enforcement
Modern Math for Parents
Firemanship
Art
Flower Arranging
Interior Decorating
Furniture Refining
Sewing
Ornamental Horticulture
Knitting

The list is, in fact, endless. Almost any subject can be taught at any achievement level if attendance is enough to justify a class. About one month is usually required for preparation before beginning a class.

ADULT BASIC EDUCATION

Adult Basic Education is a program designed with but one major purpose—that is to assist adults who wish to improve their skills in oral and written communication, arithmetic, basic science, and social studies. Classes meet two nights weekly in the local communities where there is a sufficient number of interested adults.

There is no registration fee required and materials are provided by the Adult Division of the Institute. All materials used have been especially prepared for adults with emphasis on individual needs and interests.

Group I: The basic fundamentals of reading, writing, and arithmetic are stressed in Group I. The course is designed to bring adults to a functional level whereby individual study is possible. Some basic science and social studies are introduced at this level.

Group II: Group II is a continuation of the first level with more individual study and a greater scope of subject matter including science and social studies. With the completion of Group II, the adult should be equipped to go into the Adult High School program.

COURSE DESCRIPTIONS

COLLEGE CREDIT COURSES

ART 217 INTRODUCTION TO ART 3 credits
Analysis of selected examples of architecture, sculpture, painting, crafts and industrial design in relation to their historical time and need.

ENGLISH 101-102-103 GRAMMAR AND COMPOSITION (3-3-3) credits
A study of grammar, sentence structure, principals of composition, vocabulary building; written compositions; introduction to literature.

HISTORY 101-2-3 WORLD CIVILIZATIONS (3-3-3) credits
A survey of world history; ancient and medieval; early modern; nineteenth and twentieth centuries after 1848.

GEOGRAPHY 101 PHYSICAL GEOGRAPHY 4 credits
The earth's astronomical relations, factors of weather and climate, and physiographic features.

GEOGRAPHY 102 WORLD REGIONS 5 credits
Relation of human activities to the larger geographic regions of the world.

MATHEMATICS 101 INTRODUCTION TO MATHEMATICS 5 credits
A study of the logical structure of mathematics including such topics as elementary set theory and logic, number systems, and algebric processes.

PHYSICAL EDUCATION 110 PHYSICAL FITNESS 1 credit
PHYSICAL EDUCATION 114 TENNIS AND BADMINTON 1 credit
PHYSICAL EDUCATION 115 FOLK AND SOCIAL DANCE 1 credit

POLITICAL SCIENCE 201 AMERICAN NATIONAL GOVERNMENT 3 credits
A study of the policies, functions, and programs of the national government, its organization, functions and powers.

SPEECH 101 FUNDAMENTALS OF SPEECH 3 credits
Introduction to the theory and practice of public address with emphasis on standard pronunciation, distinct articulation and the proper use of the voice in speaking.

BUSINESS TECHNOLOGY

T-ENG 101 GRAMMAR. Designated to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life. Prerequisite: None.

T-ENG 102 COMPOSITION. Designated to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: T-ENG 101.

T-ENG 103 REPORT WRITING. The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation for a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum. Prerequisite: T-ENG 102.

T-ENG 204 ORAL COMMUNICATION. A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews. Prerequisite: T-ENG 101.

T-ENG 206 BUSINESS COMMUNICATION. Develops skills in techniques in writing business communications. Emphasis is placed on writing action—getting sales letters and prospectuses. Business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances, and inquiry. Prerequisite: T-ENG 102.

T -MAT 110 BUSINESS MATHEMATICS This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount commission, taxes, and pertinent uses of mathematics in the field of business. Prerequisite: None.

T-ECO 102 ECONOMICS. The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution, and consumption both in relation to the individual enterprise and to society at large. Prerequisite: None.

T-ECO 104 ECONOMICS. Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance, and current economic problems. Prerequisite: T-ECO 102.

T-BUS 101 INTRODUCTION TO BUSINESS. A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management. Prerequisite: None.

T-BUS 102 TYPEWRITING I. Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts.

T-BUS 103 TYPEWRITING II. Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms. Prerequisite: T-BUS 102 or the equivalent. Speed requirement: 30 words per minute for five minutes.

T-BUS 104 TYPEWRITING III. Emphasis on production typing problems and speed building. Attention to the development of the student's ability to function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms. Prerequisite: T-BUS 103 or the equivalent. Speed requirements: 40 words per minute for five minutes.

T-BUS 106 SHORTHAND I. A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases. Prerequisite: None.

T-BUS 107 SHORTHAND II. Continued study of theory with greater emphasis on dictation and elementary transcription. For successful completion student should have grade of "C" in T-BUS 106. Prerequisite: Completion of, or enrollment in, T-ENG 101, T-BUS 106.

T-BUS 108 SHORTHAND III. Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription. For successful completion student should have grade of "C" in T-BUS 107. Prerequisite: T-BUS 107.

T-BUS 110 OFFICE MACHINES I. A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator. Prerequisite: None.

T-BUS 112 Filing. Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes and guides. Alphabetic, Triple Check, Automatic, Geographic, Subject, Soundex, and Dewey Decimal filing. Prerequisite: None.

T-BUS 115 BUSINESS LAW I. A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies. Prerequisite: None.

T-BUS 116 BUSINESS LAW II. Includes the study of laws pertaining to bailments, sales, risk-bearing, partnership-corporation, mortgages, and property rights. Prerequisite: T-BUS 115.

T-BUS 120 ACCOUNTING I. Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned. Prerequisite: T-MAT 110.

T-BUS 121 ACCOUNTING II. Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on recording, summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems. Prerequisite: T-BUS 120. ("C" in T-BUS 120 needed for successful completion of T-BUS 121)

T-BUS 123 BUSINESS FINANCE I. Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term, long-term, and consumer financing. Prerequisite: T-BUS 120 or T-BUS 120 to be taken concurrently with T-BUS 123.

T-BUS 124 BUSINESS FINANCE II. Financing, federal, state, and local government and the ensuing effects upon the economy. Factors affecting supply of funds, monetary and credit policies. Prerequisite: T-BUS 123.

T-BUS 125 TECHNICAL COST ACCOUNTING. Technical Cost Accounting is a course designed for engineering technology students. An interrelated system of accounting, planning, controlling, and reporting for industrial enterprises. Job-order, process, and standard costing techniques will be studied. This course is not open to accounting majors. Prerequisite: None.

T-BUS 205 ADVANCED TYPEWRITING IV. Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, and the typing of reports, manuscripts and legal documents. Speed requirement: 50 words per minute for five minutes. Prerequisite: T-BUS 104.

T-BUS 206E DICTATION AND TRANSCRIPTION I. Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Minimum dictation rate of 100 words per minute required for five minutes on new material. Prerequisite: T-BUS 108.

T-BUS 207E DICTATION AND TRANSCRIPTION II. Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business and professional offices. Minimum dictation rate of 110 words per minute required for five minutes on new material. Prerequisite: T-BUS 206E.

T-BUS 208E DICTATION AND TRANSCRIPTION III. Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Minimum dictation rate of 120 words per minute required for five minutes on new material. Prerequisite: T-BUS 207E.

T-BUS 211 OFFICE MACHINES II. Instructions in the operation of the bookkeeping-accounting machines, duplicating equipment, and the dictating and transcribing machines. Prerequisite: T-BUS 110.

T-BUS 214 SECRETARIAL PROCEDURES. Designed to acquaint the student with the responsibilities encountered by a secretary during the work day. These include the following: receptionist duties, handling the mail, telephone techniques, travel information, telegrams, office records, purchasing of supplies, office organization, and insurance claims. Prerequisite: None.

T-BUS 217 BUSINESS LAW III. A study of the powers, policies, methods, and procedures used by the various federal, state and local administrative agencies in promoting and regulating business enterprises. It includes a consideration of the constitutional and statutory limitations on these bodies and judicial review of administrative action. Prerequisite: T-BUS 116.

T-BUS 219 CREDIT PROCEDURES AND PROBLEMS. Principles and practices in the extension of credit; collection procedures; laws pertaining to credit extension and collection are included. Prerequisite: T-BUS 120.

T-BUS 222 ACCOUNTING III. Thorough treatment of the field of general accounting, providing the necessary foundation for specialized studies that follow. The course includes, among other aspects, the balance sheet, income and surplus statements, fundamental processes of recording, cash and temporary investments, and analysis of working capital. Prerequisite: T-BUS 121.

T-BUS 223 ACCOUNTING IV. Additional study of intermediate accounting with emphasis on investments, plant and equipment, intangible assets and deferred charges, long-term liabilities, paid-in capital, retained earnings, and special analytical processes. Prerequisite: T-BUS 222.

T-BUS 225 COST ACCOUNTING. Nature and purposes of cost accounting; accounting for direct labor, materials, and factory burden; job cost, and standard cost principles and procedures; selling and distribution cost; budgets, and executive use of cost figures. Prerequisite: T-BUS 121.

T-BUS 227 ADVANCED ACCOUNTING. Advanced accounting theory and principles as applied to special accounting problems, bankruptcy proceedings, estates and trusts, consolidation of statements, parent, and subsidiary accounting. Prerequisite: T-BUS 223.

T-BUS 229 TAXES. Application of federal and state taxes to various businesses and business conditions. A study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise, and inheritance. Prerequisite: T-BUS 121.

T-BUS 232 SALES DEVELOPMENT. A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required. Prerequisite: None.

T-BUS 233 PERSONNEL MANAGEMENT. Principles of organization and management of personnel, procurement, placement, training, performance checking, supervision, remuneration, labor relations, fringe benefits and security. Prerequisite: None.

T-BUS 235 BUSINESS MANAGEMENT. Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing, and financing. Clarification of the decision-making function versus the operating function. Role of management in business—qualifications and requirements. Prerequisite: None.

T-BUS 237 WHOLESALING. The development of wholesaling; present day trends in the United States. A study of the functions of wholesaling. Prerequisite: None.

T-BUS 239 MARKETING. A general survey of the field of marketing, with a detailed study of the functions, policies, and institutions involved in the marketing process. Prerequisite: None.

T-BUS 243 ADVERTISING. The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals; product and market research; selection of media; means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media. Prerequisite: None.

T-BUS 245. RETAILING. A study of the role of retailing in the economy including development of present retail structure, functions performed, principles governing effective operation and managerial problems resulting from current economic and social trends. Prerequisite: None.

T-BUS 247 BUSINESS INSURANCE. A presentation of the basic principles of risk insurance and their application. A survey of the various types of insurance is included. Prerequisite: None.

T-BUS 255 INTERPRETING ACCOUNTING RECORDS. Designed to aid the student in developing a "use understanding" of accounting records, reports and financial statements. Interpretation, analysis, and utilization of accounting statements. Prerequisite: T-BUS 121.

T-BUS 266 BUDGET AND RECORD KEEPING. The basic principles, methods, and procedures for preparation and operation of budgets. Special attention is given to the involvement of individual departments and the role they play. Emphasis on the necessity for accurate record keeping in order to evaluate the effectiveness of budget planning. Prerequisite: T-BUS 121.

T-BUS 269 AUDITING. Principles of conducting audits and investigations; setting up accounts based upon audits; collecting data on working papers; arranging and systemizing the audit, and writing the audit report. Emphasis placed on detailed audits, internal auditing, and internal control. Prerequisite: T-BUS 223.

T-BUS 271 OFFICE MANAGEMENT. Presents the fundamental principles of office management. Emphasis on the role of office management including its functions, office automation, planning, controlling, organizing and actuating office problems. Prerequisite: None.

T-BUS 272 PRINCIPLES OF SUPERVISION. Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associate. Emphasis on securing an effective work force and the role of the

T-BUS 280 TRAFFIC AND TRANSPORTATION. Stresses through-route and rates, milling in transit, technical tariff and rate interpretation, overcharges and undercharges, loss and damage, import and export tariff, classification committee procedure, and rate committee procedures.

T-BUS 281 TRAFFIC AND TRANSPORTATION. To acquaint the student with the application of the Interstate Commerce Act to practical transportation and the general procedure of requesting changes before the Interstate Commerce Commission. Prerequisite: T-BUS 280.

T-BUS 285 ICC LAW. Designed to aid the student in making a thorough analysis of the Interstate Commerce Act; review history of Act and related acts. Prerequisite: T-BUS 116.

T-BUS 286 ICC LAW. A detailed study is made of the procedural policy involved in appearing before the Interstate Commerce Commission. Prerequisite: T-BUS 285.

T-BUS 287 ICC LAW. Devoted to case study of applications of the Interstate Commerce Act. Prerequisite: T-BUS 286.

T-BUS 290 MOTOR CARRIER. An introduction to special problems relating to tariffs and rates of motor carriers. Prerequisite: None.

T-BUS 291 MOTOR CARRIER. A continuation of special problems relating to tariffs, rates, circulars, pertaining to the Motor Carrier field. Prerequisite: T-BUS 290.

T-BUS 295 TRAFFIC CLAIMS. Designed to provide knowledge about rights and liablities of carriers. consigners, and consignees; claims, their procedure, settlement, and prevention. Prerequisite: None.

T-BUS 299 TRAFFIC MANAGEMENT. Develops the purpose, function, and operation of traffic management; illustrates the differences in various areas of traffic; and shows relationship to other business operations. Prerequisite: None.

Bus 1103 SMALL BUSINESS OPERATIONS. An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations. Prerequisite: None.

BUS 1105 INDUSTRIAL ORGANIZATIONS. Methods, techniques, and practices of modern management in planning, organizing and controlling operations of a manufacturing concern. Introduction to the competitive system and the factors constituting product cost. Prerequisite: None.

VOCATIONAL COURSES

DFT 1121 BLUEPRINT READING. Interpretation and reading of blueprints used by industry. A course designed to develop the ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes. Prerequisite: None.

DFT 1122 BLUEPRINT READING. Interpretation and reading of blueprints used by industry. Information on basic principles of the blueprint; lines, views, dimensioning procedures and notes. Prerequisite: None.

DFT 1123 BLUEPRINT READING. Further practice in interpretation of blueprints as they are used in industry; study of prints supplied by industry; making plans of operations; passing on ideas, information, and processes. Prerequisite: DFT 1122.

DFT 1307 GENERAL DRAFTING. An introductory course in drafting for students needing a knowledge of drawing principles and practices for reading describing objects in the graphic language. The student is expected to gain basic skills in drawing with instruments, lettering, geometrical constructions, freehand sketching, and describing objects orthographically with principal views. Freehand sketching and orthographic reading are to be emphasized.

ENG 1101 READING IMPROVEMENT. A concentrated effort to improve the student's ability to comprehend what he reads by training him to read more rapidly and accurately. The tachistoscope is used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition, and to train for comprehension in larger units. Reading faults of the individual are analyzed for improvement, and principles of vocabulary building are stressed.

ENG 1102 COMMUNICATION SKILLS. Development to the trainee's ability to communicate effectively with other individuals through the medium of good language usage in speaking and writing, to think more clearly, and to reason more forcefully in work problems pertaining to his job.

ENG 1103 REPORT WRITING. Brief review of English grammar, spelling, and punctuation. Concentrated effort will be applied to the fundamentals of good writings; sentence structure, proper development of descriptive reporting, and the mechanics of report construction. Practice in writing letters and various report forms will be given and some time will be devoted to oral speech and note taking.

MAT 1000 ESTIMATING. This course is designed to give the student a basic understanding of estimating building materials from a blueprint, with emphasis on his major field.

MAT 1120 FUNDAMENTALS OF MATHEMATICS. Practical number theory. Analysis of basic operations, addition, subtraction, multiplication and division. Fractions, decimals, powers and roots, percentages, ratio and proportion. Plane and solid geometric figures used in industry; measurement of surfaces and volumes. Introduction to algebra used in trades. Practice in depth.

MAT 1121 MATHEMATICS. Review of fundamental number concepts, operations, and systems of measurement. Mathematical situations dealing with common and decimal fractions, powers and roots, ratio and proportions, and percentages. A study of algebraic and geometric principles and concepts needed in understanding calculations, formulas, solution of equations, and selected plane and solid geometric forms. Prerequisite: None.

MAT 1122 MATHEMATICS. Foundation for a better understanding of applied mathematics. This course is a review of simple mathematical situations dealing with fractions, decimals, conversion of one to the other, short methods and checks, percentages and applications, ratio and proportion, and powers and roots. It will also present an introduction to axiomatic solution of equations and includes special products and factoring, algebraic fractions and their applications to equations. Prerequisites: None.

MAT 1123 MATHEMATICS. Fundamental geometric concepts and construction of plane and solid figures, surface and volume measurements, and related problems; introduction to trigonometry of the right triangle. Introduces gear ratio, lead screw and indexing problems with emphasis on application to the machine

MTI Graduate discusses County business with commissioner

shop. Practical applications and problems will furnish the trainee with experience over the wide range of geometric propositions and trigonometric relations in shop problems, concluded by an introduction to compound angle problems. Prerequisite: MAT 1122.

MAT 1124 ALGEBRA. Basic concepts and operations of algebra; historical background of our base-10 number system; algebraic operations: addition, subtraction, multiplication and division; fractions, letter representation, grouping, factoring, ratio and proportions; variation; graphical and algebraic solution of first degree equations; solutions of simultaneous equations by: addition and subtraction, substitution, graphing; exponents, logarithms, tables and interpolation.

MAT 1126 TRIGONOMETRY. Trigonometric ratios; solving problems with right triangles, using tables, and interpolating; solution of oblique triangles using law of sines and law of cosines; graphs of the trigonometric functions; inverse functions, trigonometric equations. All topics are applied to practical problems.

MAT 1200 ADVANCED ESTIMATING AND LAYOUT. This course is designed to give detailed methods of estimating and use of the builders level and transit in layout work. Prerequisite: MAT 1000.

WLD 1112 WELDING. Demonstration by the instructor and practice by student in the welding shop. Safe and correct methods of assembly and operating the welding outfit will be emphasized. Practice will be given for surface welding, bronze welding, silver brazing, and flame cutting methods applicable to mechanical repair work. Prerequisite: None.

WLD 1114 SHOP PROCESSES. Comparison of the unit-production and mass-production systems. Casting, forging and allied processes, welding and sheet metal working processes are demonstrated and discussed. Mass-production methods are studied in relationship to precision dimensional control. Prerequisite: WLD 1112.

PHY 1104 APPLIED PHYSICS I. Introductory course in physics, and its applications. Covers systems of measurement, theory of matter, properties of solids, liquids, and gases. Prerequisite: None.

PHY 1105 APPLIED PHYSICS II. Basic principles of electricity, types of electricity, and its production, transmission, and transformation. Such factors as the electron theory, electrial measurement,, magnetism, electromagnetism, and the magnetic effects of electricity constitute major areas of study. Prerequisite: PHY 1104.

PHY 1106 APPLIED PHYSICS III. Physical principles of force, energy, work and power; equilibrium and the laws of motion; principles of machines, mechanical advantage, and transmission of power in practical applications and the use of vectors and graphical presentations.

SOC 1101 HUMAN RELATIONS. The purpose of the course is to help the student acquire greater understanding of his relations to other persons through learning and applying some of the basic principles of human psychology. The problems of the individual and his work situation are studied in relation to the established organization of modern business and industry and in relation to government practices and labor organization, with special emphasis on the operating responsibilities of good management.

SOC 1103 MANAGEMENT PROCEDURES. Management procedures are developed to familiarize the prospective businessman with the many important functions that must be carried on in the operation of a small business or enterprise. An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations are some of the subjects studied.

Automotive Mechanics

AUT 1121 AUTOMOTIVE THEORY AND PRACTICE – ENGINES. Designed to give the student a thorough knowledge in the use, maintenance, and storage of the various tools and measuring devices needed in automotive work. A study of the construction and operation of components of automotive engines. The student will learn testing of engine performance, servicing and maintenance for pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing and repairing of failure and defects in the various engine mechanisms. Prerequisite: None.

AUT 1122 AUTOMOTIVE THEORY AND PRACTICE – ELECTRICAL AND FUEL SYSTEMS. A thorough study of the electrical and fuel systems of the automobile, the electrical system and its components; battery cranking mechanism, generator, ignition, accessories, and wiring. Intensive training in the components and operation of various types of automotive fuel systems. Characteristics of fuels and types of fuel systems for which they are best adapted. The special tools, circuits, and testing equipment for the fuel and electrical system are studied. Prerequisite: AUT 1121.

AUT 1123 AUTOMOTIVE THEORY AND PRACTICE – CHASSIS AND SUSPENSIONS. Principals and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of the suspension, steering, and braking systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, front end adjustments, types and servicing of brakes, etc. Prerequisite: AUT 1121, 1122.

AUT 1101 – SMALL ENGINE REPAIR. The purpose of this course is to teach the why and how of gasoline engine operations. A careful study of the theory and operating principles, plus actual practice in servicing and repairing engines will enable anyone to minimize engine troubles and to correct those troubles that do exist. The course will in general deal with small engines. Multicylinder engines will be included.

AUT 1124 AUTOMOTIVE THEORY AND PRACTICE – POWER TRAIN. Detailed analysis of the components of the automotive power train system, with the emphasis on identification of troubles which develop in these components and the correct servicing and repair. Included are: types of clutches, clutch operation, inspection and servicing clutches; functions of the transmission gears, principles and operation of the various transmission and torque converter types, service and repair; operation, diagnosis and servicing for drive shaft assemblies, rear axles, and differentials. Prerequisites: PHY 1105; 1106; AUT 1121, 1122, 1123.

AUT 1125 AUTOMOTIVE TESTING AND SERVICE. Emphasis is on the shop procedure necessary in determining the nature of troubles developed in the various component systems of the automobile. Extensive use of testing equipment will be made on the actual problem situations. A close simulation to the actual automotive shop will be maintained and every effort will be made to give the student a full range of testing and servicing experience. Prerequisites: AUT 1121, 1122, 1123, 1124.

AUT 1111 AUTO BODY REPAIR. Basic principles of automobile construction, design, and manufacturing. A thorough study of angles, crown, and forming of steel into the complex contour of the present day vehicles. The student applies the basic principles of straightening, aligning, and painting of damaged areas. Prerequisite: None.

WLD 1101 BASIC GAS WELDING. Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding; bronze welding, silver-soldering, and flame-cutting methods applicable to mechanical repair work. Prerequisite: None.

AUT 1112 AUTO BODY REPAIR. A through study of the requirements for a metal worker, including the use of essential tools, forming fender flanges and beads, and straightening typical auto body damage. The student begins acquiring skills such as shaping angles, crowns, and contour of the metal of the body and fenders. Metal working and painting. Prerequisites: AUT 1111, WLD 1101, PHY 1101, MAT 1101.

WLD 1105 AUTO BODY WELDING. Welding practices on material applicable to the installation of body panels and repairs to doors, fenders, hoods, and deck lids. Student runs beads, does butt and fillet welding. Performs tests to detect strength and weaknesses of welded joints. Safety procedures are emphasized throughout the course. Prerequisite: WLD 1101.

DFT 1101 SCHEMATICS AND DIAGRAMS: POWER MECHANICS. Interpretation and reading of schematics and diagrams. Development of ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes. Prerequisite: None.

AUT 1113 METAL FINISHING AND PAINTING. Development of the skill to shrink stretched metal, soldering and leading, and preparation of the metal for painting. Straightening of doors, hoods, and deck lids; fitting and aligning. Painting fenders and panels, spot repairs, and complete vehicle painting; the use and application of power tools. Prerequisites: AUT 1112, WLD 1105.

AUT 1115 TRIM, GLASS AND RADIATOR REPAIR. Methods of removing and installing interior trim; cutting, sewing and installing headlinings, seat covers, and door trim panels; painting of trim parts and accessories. Glass removal, cutting, fitting, and installation. The student gains a thorough knowledge of the engine cooling system and repairs and replaces damaged cooling system components. Tests are made to insure normal engine cooling operation. Prerequisites: AUT 1112, WLD 1105.

AUT 1114 BODY SHOP APPLICATIONS. General introduction and instruction in the automotive frame and front end suspension systems, the methods of operation and control, and the safety of the vehicle. Unit job application covers straightening of frames and front wheel alignment. The student applies all phases of training. Repair order writing, parts purchasing, estimates of damage, and developing the final settlement with the adjuster. Prerequisites: AUT 1115, PHY 1102, DFT 1101.

Mechanical Drafting

DFT 1121 DRAFTING. An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments, single-stroke lettering, applied geometry, freehand sketching consisting of orthographic and pictorial drawings. Orthographic projection, reading and instrument drawings of principal views, single auxiliary views (primary), and double (oblique) auxiliary views will be emphasized. Dimensioning and note practices will be studied with reference to the American Standards Association practices. Methods of reproducing drawings will be included at the appropriate time. Prerequisite: None.

MAT 1103 GEOMETRY. Fundamental properties and definitions; plane and solid geometric figures, selected general theorems, geometric construction of lines, angles and plane figures. Dihedral angles, areas of plane figures, volumes of solids. Geometric principles are applied to shop operations. Prerequisite: None.

ENG 1101 READING IMPROVEMENT. Designed to improve the student's ability to read rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition and to train for comprehension in larger units. Prerequisite: None.

PHY 1101 APPLIED SCIENCE. An introduction to physical principles and their application to industry. Topics in this course include measurement; properties of solids, liquids, and gases; basic electrical principles. Prerequisite: None.

DFT 1122 DRAFTING. The trainee will study simple and successive revolutions and their applications to practical problems. Sections and conventions will be studied and both detail and assembly sections will be drawn. Intersections and developments will be studied by relating the drawing to the sheet metal trades. Models of the assigned drawings will be made from construction paper, cardboard, or similar materials as a proof of the solution to the problems drawn.

Methods of drawing and projecting axonometric, oblique, and perspective drawings will be studied with emphasis on the practical applications of pictorial drawings. Various methods of shading will be introduced and dimensioning and sectioning of obilque and axonometric pictorials will be done. Prerequisite: DFT 1121.

DFT 1125 DESCRIPTIVE GEOMETRY. Graphical analysis of space problems. The problems deal with practical design elements involving points, lines, planes, connectors, and a combination of these. Included are problems dealing with solid geometry theorems. Where applicable, each graphical solution shall be accomplished by the analytical solution. Prerequisite: DFT 1121.

MAT 1102 ALGEBRA. Basic concepts and operations of algebra: historical background of our base-10 number system; algebraic operations: addition, substraction, multiplication and division; fractions, letter representation, grouping, factoring, ratios and proportions, variation; graphical and algebraic solution of first degree equations; solution of simultaneous equations by: addition and subractation, substitution, graphing; exponents, logarithms, tables and interpolation. Prerequisite: None.

ENG 1102 COMMUNICATION SKILLS. Designed to promote effective communication through correct language usage in speaking and writing. Prerequisite: ENG 1101.

PHY 1102 APPLIED SCIENCE. The second in a series of two courses of applied physical principles. Topics introduced in this course are heat and thermometry, and principles of force, motion, work, energy, and power. Prerequisite: PHY 1101.

DFT 1131 MECHANICAL DRAFTING. An introduction to mechanical drafting beginning with problems concerning precision and limit dimensioning. Methods of fastening materials, and fasteners, keys, rivets, springs, and welding. Symbols will be studied and drawings will be made involving these items. Principles of design will be introduced with the study of basic mechanisms of motion transfer; gears, cams, power trains, pulleys, belting and methods of specifying and calculating dimensions will be studied. Drawings will be made involving these mechanisms. Prerequisite: DFT 1122.

MAT 1104 TRIGONOMETRY. Trigonometric ratios; solving problems with right triangles, using tables, and interpolating; solution of obilique triangles using law of sines and law of cosines; graphs of the trigonometric functions; inverse functions, trigonometric equations. All topics are applied to practical problems. Prerequisites: MAT 1102, MAT 1103.

MEC 1113 SHOP PROCESSES (Materials and Processes). A study of practices and processes used in the shaping, forming, and fabrication of wood, metal, plastics, and ceramics. The properties of these materials and their utilization in the various industries. A study of the various industries. A study of the various machines used in the forming of these materials and their capabilities. Practices used in fastening and forming these materials. Demonstrations of methods, machines, and processes.

DFT 1132 MECHANICAL DRAFTING. Principles of design sketching, design drawings, layout drafting, detailing from layout drawings, production drawings and simplified drafting practices constitute areas of study. Forging and casting drawings will be made from layouts. Specifications, parts list and bill of materials are emphasized in this course. The student will develop a complete set of working drawings of a tool, jig, fixture or simple machine and learn principles of design, handbook and manual usage. Prerequisite: DFT 1131.

MEC 1114 SHOP PROCESSES. Comparison of the unit-production and mass-production systems. Casting, forging and allied processes, welding and sheet metal working processes are demonstrated and discussed. Mass-production methods are studied in relationship to precision dimensional control. Prerequisite: MEC 1113.

MEC 1115 TREATMENT OF FERROUS METALS. Investigates the properties of ferrous metals and tests to determine their uses. Instruction will include some chemical metallurgy to provide a background for the understanding of the physical changes and causes of these changes in metals. Physical metallurgy of ferrous metals, producing iron and steel, theory of alloys, shaping and forming, heat treatments for steel, surface treatments, alloy of special steel, classification of steels, and cast iron will be topics for study. Prerequisite: None.

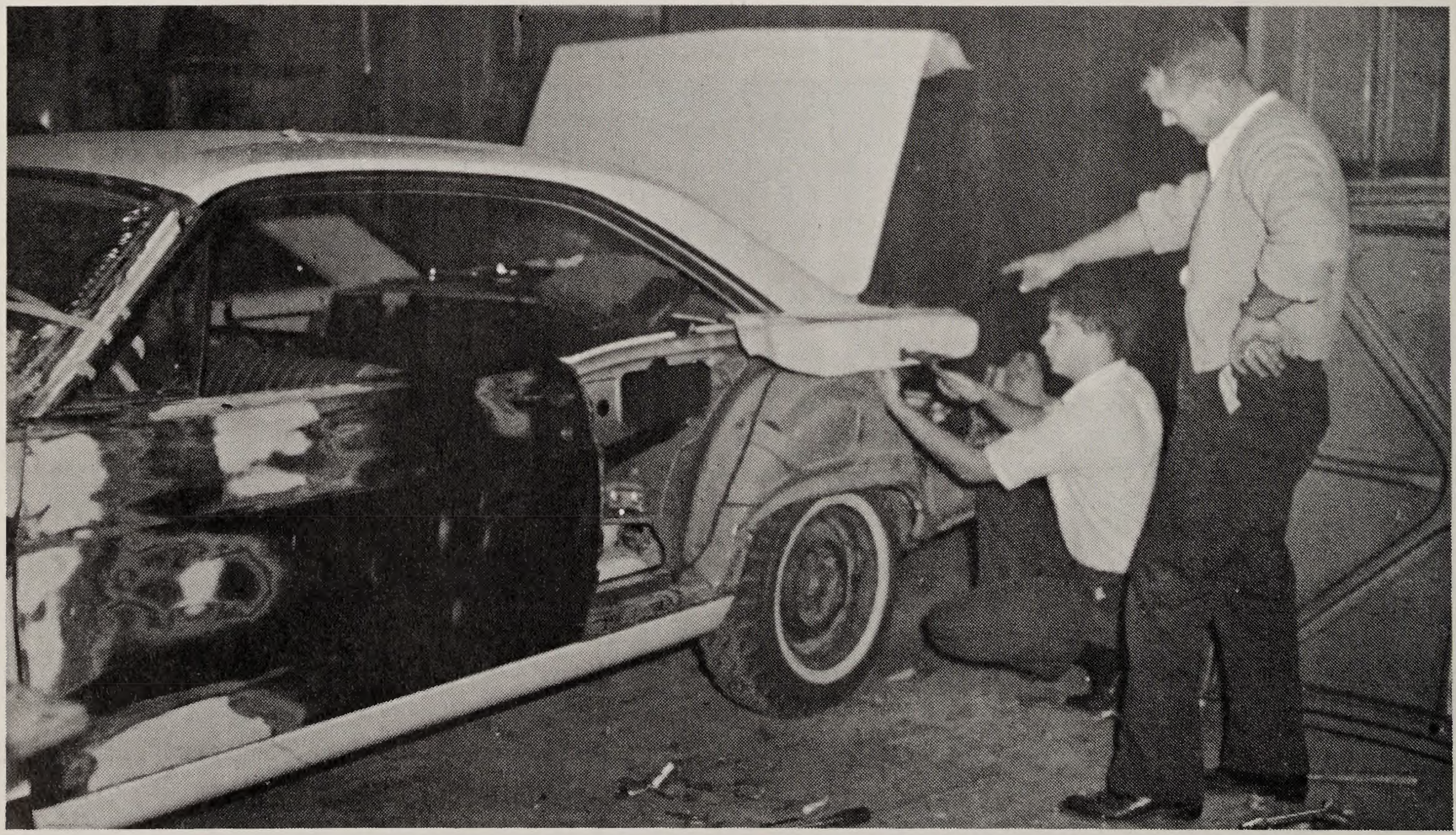
BUS 1105 INDUSTRIAL ORGANIZATIONS. Methods, techniques, and practices of modern management in planning, organizing and controlling operations of a manufacturing concern. Introduction to the competitive system and the factors constituting product cost. Prerequisite: None.

Electrical Installation & Maintenance

ELC 112 DIRECT AND ALTERNATING CURRENT. A study of the electrical structure of matter and electron theory, the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. An analysis of direct current circuits by Ohm's Law and Kirchhoff's Law. A study of the sources of direct current voltage potentials. Fundamental concepts of alternating current flow, reactance, impedance, phase angle, power, and resonance. Analysis of alternating current circuits. Prerequisite: None.

MAT 1115 ELECTRICAL MATH. A study of fundamental concepts of algebra; basic operations of addition, subtraction, multiplication, and division; solution of first order equations, use of letters and signs; grouping, factoring, exponents, ratios, and proportions; solution of equations, algebraically and graphically; a study of logarithms and use of tables; and introduction to trigonometric functions and their application to right angles; and a study of vectors for use in alternating current. Prerequisite: None.

ELC 1113 ALTERNATING CURRENT AND DIRECT CURRENT MACHINES AND CONTROLS. Provides fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers, and motors. Instruction in the use of electrical test instruments in circuit analysis. The basic concepts of AC and DC machines and simple system controls. An introduction to the type control used in small appliances such as: thermostats, timers, or sequencing switches. Prerequisites: ELC 1112, MAT 1115.



DFT 1110 BLUEPRINT READING: BUILDING TRADES. Principles of interpreting blueprints and trade specifications common to the building trades. Development of proficiency in making three view and pictorial sketches. Prerequisite: None.

ENG 1102 COMMUNICATION SKILLS. Designed to promote effective communication through correct language usage in speaking and writing. Prerequisite: ENG 1101.

ELC 1124 RESIDENTIAL WIRING. Provides instruction and application in the fundamentals of blueprint reading, planning, layout, and installation of wiring in residential applications such as: services, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, National Electrical Code regulations in actual building mock-ups. Prerequisites: ELC 1113, DFT 1110.

ELN 1118 INDUSTRIAL ELECTRONICS. Basic theory, operating characteristics, and application of vacuum tubes such as: diodes, triodes, tetrodes, pentodes, and gaseous control tubes. An introduction to amplifier using triodes, power supplies using diodes, and other basic applications. Prerequisite: ELC 1113.

DFT 113 BLUEPRINT READING: Electrical. Interpretation of schematics, diagrams and blueprints applicable to electrical installations with emphasis on electrical plans for domestic and commercial buildings. Sketching schematics, diagrams and electrical plans for electrical installations using appropriate symbols and notes according to the applicable codes will be a part of this course. Prerequisite: DFT 1110.

ELC 1125 COMMERCIAL AND INDUSTRIAL WIRING. Layout, planning, and installation of wiring systems in commercial and industrial complexes, with emphasis upon blueprint reading and symbols, the related National Electrical Codes, and the application of the fundamentals to practical experience in wiring, conduit preparation, and installation of simple systems. Prerequisites: ELN 1118, ELC 1124.

ELN 1119 INDUSTRIAL ELECTRONICS. Basic industrial Electronic systems such as: motor controls, alarm systems, heating systems and controls, magnetic amplifier controls, welding control systems using thyratron tubes, and other basic types of systems commonly found in most industries. Prerequisite: ELN 1118.

BUS 1103 SMALL BUSINESS OPERATIONS. An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations. Prerequisite: None.

Welding

WLD 1101 BASIC GAS WELDING. Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding; bronze welding, silver-soldering, and flame-cutting methods applicable to mechanical repair work. Prerequisite: None.

WLD 1112 MECHANICAL TESTING AND INSPECTION. The standard methods of mechanical testing of welds. The student is introduced to the various types of tests and testing procedures and performs the details of the test which will give adequate information as to the quality of the weld. Types of tests to be covered are: bend, destructive, free-bend, guided-bend, nick-tear, notched-bend, tee-bend, nondestructive, V-notch, Charpy impact, etc. Prerequisites: WLD 1120, WLD 1121.

WLD 1120 OXACETYLENE WELDING AND CUTTING. Introduction to the history of oxyacetylene welding, the principles of welding and cutting, nomenclature of the equipment, assembly of units. welding procedures such as practice of puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead position, brazing, hard and soft soldering. Safety procedures are stressed through the program of instruction in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds. Prerequisite: None.

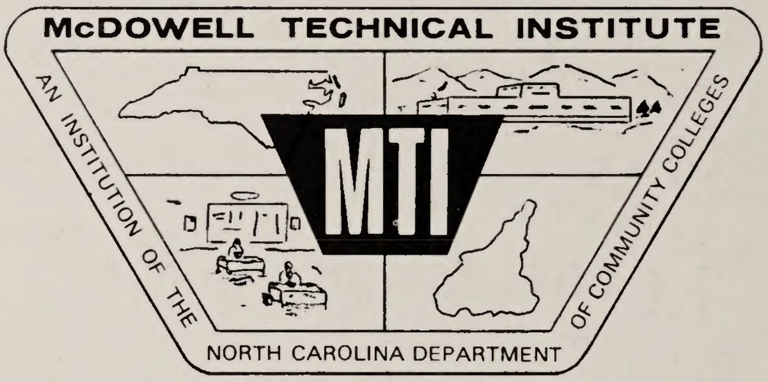
WLD 1121 ARC WELDING. The operation of AC transformers and DC motor generator arc welding sets. Studies are made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After the student is capable of running beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weaknesses in welding. Safety procedures are emphasized throughout the course in the use of tools and equipment. Prerequisite: None.

WLD 1122 COMMERCIAL AND INDUSTRIAL PRACTICE. Designed to build skills through practices in simulated industrial processes and techniques: sketching and laying out on paper the size and shape description, listing the procedure steps necessary to build the product, and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing worn or broken parts by special welding applications, field welding and nondestructive tests and inspection. Prerequisites: WLD 1120, WLD 1121.

WLD 1123 INERT GAS WELDING. Introduction and practical operations in the use of inert-gas-shield arc welding. A study will be made of the equipment, operation, safety and practice in the various positions. A thorough study of such topics as: principles of operation, shielding gases, filler rods, process variations and applications, manual and automatic welding. Prerequisites: WLD 1120, WLD 1121.

WLD 1124 PIPE WELDING. Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding processes according to Sections VIII and IX of the ASME code. Prerequisite: WLD 1121.

WLD 1125 CERTIFICATION PRACTICES. This course involves practice in welding the various materials to meet certification standards. The student uses various tests including the guided bend and the tensile strength tests to check the quality of his work. Emphasis is placed on attaining skill in producing quality welds. Prerequisites: WLD 1120, WLD 1121, WLD 1123, WLD 1124.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